

To Protect & Maintain Your PC

The Common Person's Guide to Securing, Maintaining, and Backing Up your Windows XP, Vista, or 7 Computer.

By

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INTRODUCTION

Why should you read this booklet?

The short answer is:

- *It's concise,*
- *It's important information for your computer,*
- *And it's easy to read and understandable.*

The long answer is:

This booklet was written for the common computer user: the person who web surfs, e-mails, creates documents and spreadsheets, plays an occasional computer game, etc. They know that they should protect and maintain their computer, but they are unsure of what that really means, or are confused by all the "Geek Speak" and technology options. I speak fluent Geek, but I also speak English. In this booklet I attempt to speak English, with an occasional aside in "Geek Speak."

This booklet is not as large as it appears; only about half of the booklet is the subject matter. The first part of the booklet is about *Protection*: how to protect your computer against the *Environment*, *Disasters*, and *The Bad Guys* (TBG). The next part is what you need to know in order to *Maintain* your computer, and the *Tools* you need for the maintenance. The last part is *Appendices* that provide other useful or interesting information.

I have tried to keep this booklet as concise as possible, as I know your time is valuable and limited (and that you won't read it if it isn't concise) Please feel free to contact me via e-mail at (mark@profitpages.com) with any suggestions for improvement, or in the rare case where you may have a criticism of the booklet.

Note 1 – Throughout this booklet I will use the notation *Menu Item*-> *Sub Menu Item* -> *Item* to notate when you use your mouse to select an action to be performed on your computer.

Note 2 - This booklet is provided as Donationware. Please visit my PayPal account to donate whatever amount you think is appropriate for this booklet. Your donations will allow me to expand and improve this booklet. All donors will receive new editions to this booklet when they become available. Thank you for your donations

SECURING YOUR PC

At my initial consultation with a new client, I inform them that I have three rules I insist they follow. They are:

1. You Will Protect your computer from *The Bad Guys (TBG)*.
2. You Will Protect your computer from the *Environment*.
3. You Will *Backup, Backup, and Backup!*

All of these rules are important for securing your computer.

ACCESS PROTECTION

The information on your computer is valuable not only to you, but perhaps to others as well. You need to protect it from identity thieves as well as prying eyes. Not only should you worry about protecting your own personal information, if you deal with confidential information about someone else (like medical, financial, or legal information), you must be proactive in protecting that information. Otherwise you could run afoul of Federal Privacy laws.

LOGIN / LOGOUT / TIMEOUTS

Never leave an active computer unattended and logged on. Set your User Control Panel to logoff after a small amount of inactivity (no more than 10 minutes), and require a password when it comes back on (Windows XP *Control Panel -> Display -> Screen Saver*, Windows Vista or 7 *Control Panel -> Personalize -> Screen Saver*). This is especially important for a Laptop if it is stolen or lost. You may even wish to change your password on a regular basis if the computer is not kept in a private place.

USERNAMES / PASSWORDS

Never make your user name your real name! Come up with a nickname for yourself, and use variations from the nickname. You may even wish to have three different e-mail addresses. One for public use (for visiting web sites that request your e-mail address), one semi-private that you give out to friends, relatives, and associates, and one for your own private usage. You can then configure your e-mail to behave (via message rules) differently for each e-mail address.

Develop a consistent password scheme that is difficult to guess but easy to remember. It should be at least 6 alphabetic characters, 1 special character, and 1 number. For instance if you choose "spanky" as the basis of your password, change it to "3973Sp@nky" or "39Sp@nky73".

SYSTEM AND ACTIONS RESTRICTIONS


Password protect sensitive information, i.e. your financial programs, customer relation programs, personal information management, etc. using the built-in passwords function of most computer programs. Allow individuals to only review

information they are authorized to see by restricting access to sensitive information via Windows built in file/folder sharing. Consider hiding folders (See Gizmo's [How to Hide a Windows Folder](#)) by requiring a password to access them.

Make it difficult to accidentally replace, delete or move information on your computer. Only allow access to folders for which the users has a legitimate need to read, write, or update. This is accomplished by using the "Sharing" option within Windows.

WIRELESS NETWORKING ISSUES

Remember to set a password for your wireless modem/router. This will prevent unauthorized usage of your internet connection, as well as prying eyes to the data on your computer. See your router's user guide on how to set-up a wireless password.



POWER PROTECTION

PECO said its average interruption frequency indicator improved from 0.76 to 0.63 last year, meaning the average customer experienced a power outage only about once every 19 months. The statistics above exclude 13 days with notable storm activity, five more storms than the average year. About 44 percent of all PECO customer interruptions in 2008 occurred during storms. The company tracks average outage duration as a better indicator of its operational performance in storms. This measure showed the average duration of customer interruptions was 90 minutes during non-storm days and 184 minutes, or roughly three hours, during storm days, which was similar to the previous year.

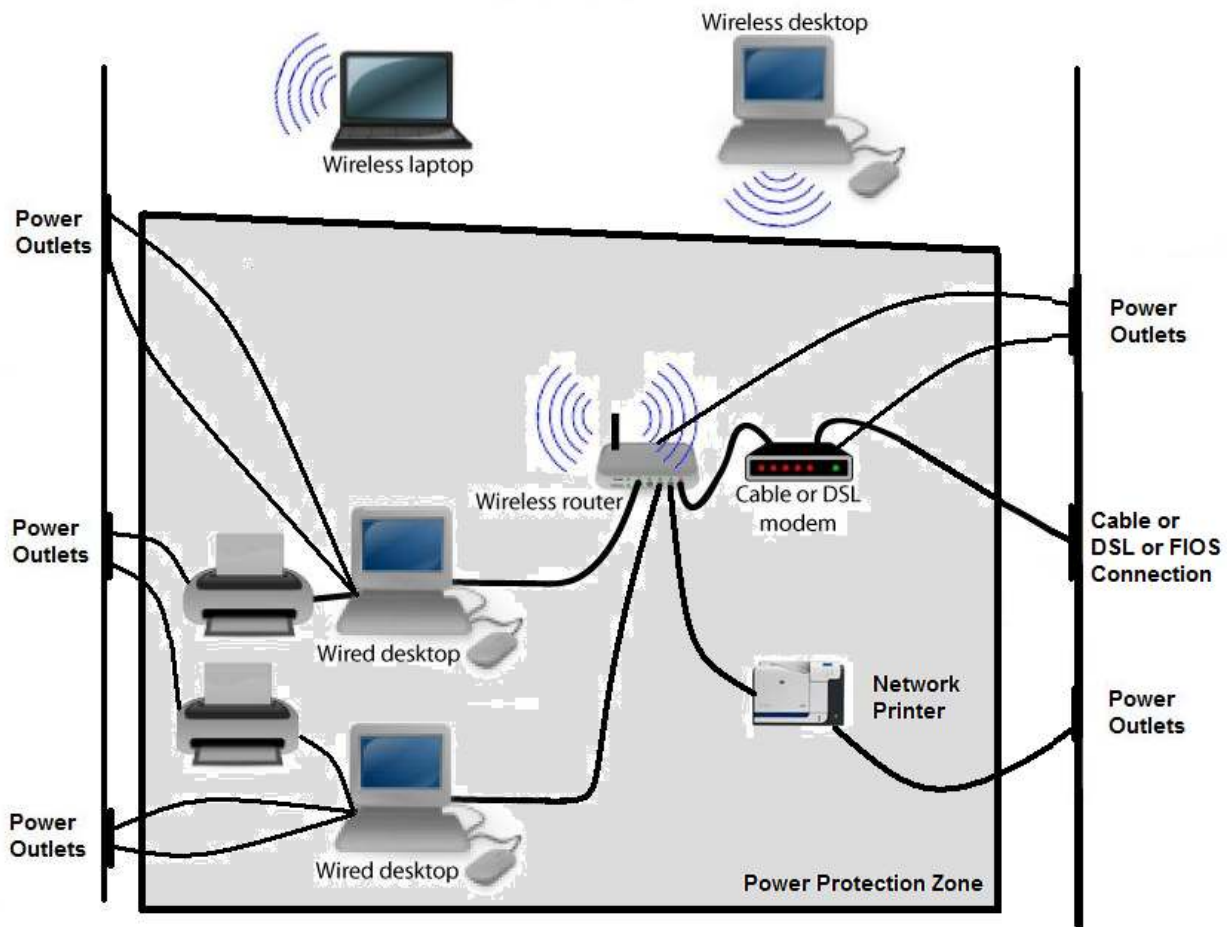
What the above means is that for several hours (or days) each year you will be without electrical power. This usually happens unexpectedly so you must always be fully prepared. You must think of your computers as an interconnected system. Any wires that attach to your computer or peripheral devices must be protected from surges that could affect your computer. When computers are interconnected (such as a network or shared equipment, i.e. printers, scanners, etc.) you must protect all the computers and devices attached to the network.

POWER BROWNOUTS / BLACKOUTS

Everyone is aware of blackouts, but a much more insidious threat is brownouts. PECO states that they will deliver 115 Volts plus or minus 3 volts 99% of the time. That means that for over 3 days a year you will be out of the safe operating range of your computer. This is when many “gremlins” can sneak into your computer. The gremlins are mostly System and/or Data Corruption that occur when you attempt to write to a disk drive when there is too much, or too little, power.

POWER SURGES

Power Lines, Telephone Lines, Network Connections, etc. are all sources of power surges. I often make a rough drawing of my clients’ computers with all the peripheral devices attached to them (as shown on the next page). Then, I draw a box around them and cross over any electrical cords or communication cables that need to enter the circle. I then know I need to protect those devices from possible electrical surges through the cord or cable.



Any lines that cross over the shaded area must be protected from power surges. It is also a good idea to have a UPS for the computer, monitor and network equipment (see below). The wireless computers must also be protected from power problems, but they are standalone devices that should have their own UPS.

SOLUTIONS TO ALL POWER PROBLEMS

Many gremlins inside your computer started life as a power problem. Stop these fiendish problems before they are born. The solution to all your electrical problems is an Uninterruptible Power Supply (UPS) with surge-protection. A UPS provides enough backup power for you to work through short and medium length power outages. It also safeguards your equipment from damaging surges and spikes that travel along your utility and data lines. Most models include management software, which automatically saves open files and gracefully shuts down your computer during extended outages. Additional features like an audible alarm, LED status indicator, user replaceable battery, push-button circuit breaker and transformer-block spaced outlets make a UPS a must have in your computer environment. Protect your equipment from the constant threat of power outages, surges, and lost/corrupted data. See Appendix H - Equipment Recommendations for more information on UPS's.

PHYSICAL PROTECTION

THE ELEMENTS

It's a cruel world out there for your computer. The following are some of the hazards your computer faces.

DUST, DIRT & HAIR

You would be amazed how dirty your equipment can become just sitting there. The fan in your computer helps keep it cool by sucking in cool air and expelling warm air. It also sucks in dust, dirt, hair, crumbs, etc.. It is important that you keep the vents of your computer free of these particulates so the air flow is even and sufficient to cool your computer. You should also occasionally crack open your computer and blow out the accumulated particulates. The best way to accomplish this is to purchase Electronic Grade Compressed Air (Only!), then blow the air across the vents of your computer. You should also use this air to clean out your keyboard, mouse, printer, scanner, etc. See your equipment manufacturers' guide for the best way to clean these devices. You should have a cleaning kit that not only has compressed air but electronics certified cleaning cloths or fluids (Only!).

SMOKE PARTICLES

Do not smoke, cook, or barbeque (no kidding – I had a client who setup his laptop near the barbeque and it suffered smoke damage just as his guests did).

LIQUIDS AND FOOD

Keep all food and liquids a safe distance, and not on the same surface as your computer. Food and water are excellent nutrients for humans, but a disaster waiting to happen to a computer.

HEAT, COLD, AND HUMIDITY

Make sure your computer is not in a warm room, as this will overheat the computer and possibly damage it. Do not leave your laptop in the car (even overnight) as if it gets too hot or cold it may become damaged.

ERGONOMICS (VERY IMPORTANT TO PRODUCTIVITY)

Ergonomics is very important to your own health. It is so important that I have included in this booklet Appendix J – Computer Workstation Ergonomics. I would encourage you to read this appendix to help prevent aches and pains that can arise from your working on your computer.

LOCATION, LOCATION, LOCATION

At one new client I visited their server was directly underneath a fire sprinkler head. Needless to say that head was turned off and eventually moved to another location. Other clients had their computer near a heating / air conditioning vent, which led to overheating in the winter and dust & dirt year round. Other client's computers have been in enclosed spaces or tucked away where it was impossible for air to flow to keep the computer cool. Think about the health of you computer when you decide where to position it.

DESKTOPS (POSITIONING FOR SAFETY AND SECURITY)

Place your desktop computer in an environmentally safe place, but also think about you utilization of the computer. Don't put it where you can kick it, or so far way that you cannot reach it comfortably from your computer chair.

LAPTOPS (DOCKING STATION & CABLE LOCK)

Laptop theft is rampant, almost as much as losing a laptop. In case of loss or theft it is doubly important that you implement the security protection described above. Consider getting a cable lock for your laptop (see manufacture's suggestion for what type of cable lock) for when your laptop is on its desk. You may also wish to obtain a laptop stand that tilts your laptop. This stand allows airflow around the computer thereby helping to keep it cool.

DOORS & LOCKS

One of the best ways to secure your computer is to lock it behind a secure door. When you leave your computer room or office lock the door behind you (especially if you are going out for a meal).

For more information on securing you computer consult Gizmo's [Guide to Securing Your PC](#) and Gizmo's [How to Hide a Windows Folder](#). I highly recommend you review the software and articles of Gizmo's [How-to Guides / Tutorials](#) & [FreeWare](#).

DISASTER PROTECTION

BACKING UP YOUR PC

**Remember there are two types of computer users -
those that backup and those that wish they had!**

Don't skip that backup. I know it can be a disturbance to do the backup, but imagine how much disturbance it would be if your computer failed and you didn't have a backup. I have had several occasions in the past few years where a backup was crucial to an organization recovering information from their computer after a serious computer failure (or in one case a stolen computer). On one occasion the organization did not backup regularly and they had to spend several days reentering/recreating their information after a computer failure. Don't let this happen to you -

BACKUP REGULARLY AND FREQUENTLY!!!

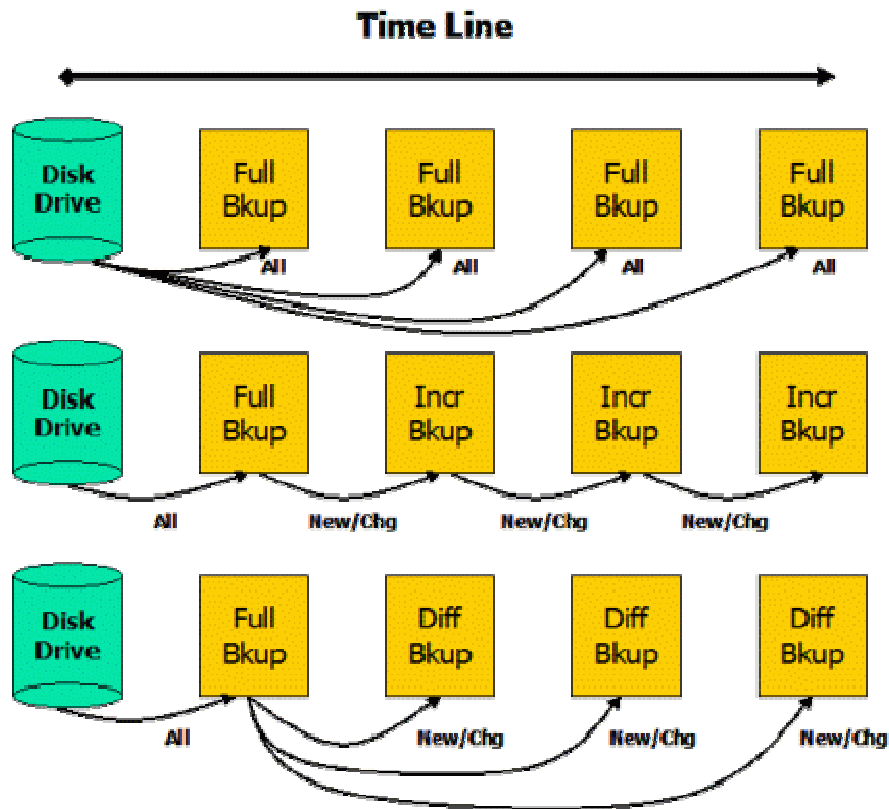
The first question you must address is the Type of Backup you should do. There are basically four types of backups;

1. Documents and Data Only
2. System Parameters and Settings
3. All Files except Cache Files
4. All Volumes

A documents and data only backup is as its name implies – only documents you have created, or data within an application program (such as accounting or contact managers) is backed up. This preserves your critical information in the event of a failure of your computer. A System Parameters and Settings backup adds to the Documents and Data Only backup by preserving additional information that is important to your computer environment (Favorites, Email, Application Program Settings, etc.). All Files but Cache Files backs up everything on your computers boot drive (usually C:), except temporary files that are utilized by the operating system and utilities of your computer. All Volumes backs up everything in your computer. The major difference between these types of backups is the time required to perform the backup, the size of the backup media, and the effort required to restore your computer to a pre-failure state.

As you proceed from a type 1 to a type 4 backup it takes longer to perform the backup, and more space on the backup media is required. However in the event of a major failure to your computer the effort to restore your computer to its pre-failure state will be more extensive with a type 1 or 2 backup (you may have to re-install the operating system, utilities, application programs, and various other computer items). A type 3 or 4 backup lessens the effort required to restore your computer to a pre-major failure state.

Regardless of the backup type you choose the backup itself can come in three different methods: Full vs. Incremental vs. Differential. These different methods are best illustrated with the following diagram:



A Full Backup backs up everything up each time it is run as illustrated by the first row on the diagram. An Incremental Backup backs up only new or changed items from the previous Incremental Backup (with a Full Backup starting the process). This is illustrated by the second row on the diagram. A Differential Backup backs up all new or changed items from the last time a Full Backup was run, as illustrated by the third row of the diagram.

A Full Backup takes a long time to run, and a considerable amount of backup media to accomplish. However, a restore from a Full Backup is much quicker. An Incremental Backup takes the shortest amount of time, and the least amount of backup media to accomplish. However, the effort to restore from an Incremental Backup can be very time consuming. A Differential Backup lies between the two in terms of backup time, media size, and restore efforts. Running a Full Backup on a regular basis to restart the Incremental and Differential method will help reduce the time and media size needed. Most modern backup software also compresses the backup files to reduce the time required to backup, as well as the media size needed.

Each method of backup is a two step process. After the files are backed up (step 1) the backup software will verify it backed up the files correctly (step 2) by comparing the backup files to the original files. Because modern operating systems are dynamic you will always see a few errors reported because the operating system state files changed between the backup time and verification time. These types of errors can be ignored, but you should review your backup log on a regular basis

to assure that the backups are running properly. You should also set your backup program to e-mail you a status message after the backup is finished.

The media you use to backup also plays a major part in the backup process. The media type can range from an external hard drive, a tape drive, removable media (such as zip disks, disk cartridges, and flash drives), and DVD/CD's. Each has its advantages and disadvantages. The main factors to consider are the size of the media, the speed of the media, the reliability of the media, and the media cost. The larger the size of the media the less often will you need human intervention when it fills up. The faster the media the faster will be the backup and restore times. Speed of the backup and restore is also lessened or increased based on how the media is accessed by the computer. For instance tape must be read/written sequentially, while the other media types can often be read/written directly. Media reliability is determined by many factors, which is beyond the scope of this booklet. Generally however, the smaller organization will be backing up to external hard drive or removable hard drive. Cost of the backup media is always a concern to the small organization, and must be factored into the equation. The frequency of the backup, the size of the backup media, and the rotation of the backup media are some of the other factors that go into the cost. The actual media device cost is also a onetime factor that must be considered.

The frequency of which you perform your backup is also important. For most small organizations the backup should be performed on a daily basis. For other computer users the frequency of backup should be determine on how often you utilize your computer, and the importance of the data changes between the backup cycles. The media you use to backup your computer should also be rotated and/or replaced on a regular basis. A backup rotation scheme is a method for effectively backing up data where multiple media (such as removable media or tapes) are used in the backup process. The scheme determines how and when each piece of removable storage is used for a backup job and how long it is retained once it has backup data stored on it. Different techniques have evolved over time to balance data retention and restoration needs with the cost of extra data storage media. Such a scheme can be quite complicated if it takes incremental backups, multiple retention periods, and off-site storage into consideration. This is to assure that if you have a media failure the impact will be lessened. You will also want to mix and match the types and methods of backup, to assure the optimal means of protecting your computer environment and information.

The only means to properly back up your computer is with backup software. This software should be installed and configured within your computers environment, backup device and media, as well as types and method of the backups and the schedule for backups. All of this should be automated to the greatest extent possible, to reduce the possible of human error in the process

Finally, the location of your backup media is crucial. It does you no good to backup if the backup media is somehow destroyed. After you back up you should store your media at an offsite location, or an electronic media fireproof safe (very expensive and not always reliable). I would recommend that the backup media not currently being utilized for the backup be store away from the organization (offsite location). This way, in the unfortunate event your organization is ruined (fire, flood, theft, etc.), you can restore your data from a backup that was not affected by the incident that destroyed the original data.

The planning for your Backup and Restore procedures should not be done in a haphazard manner. Much care and thought should be put into planning your backup/restore procedures. Carefully monitor your backups to assure that they are running properly. If your computer should fail you will need that backup. Once again I will remind you that There are two types of computer users - those that backup and those that wish they had! Don't wish you had a backup, and don't skip that backup.

“The difference of having a good backup and not having a good backup could be the difference of having a business and being out of business.”

RESTORING YOUR PC

Backing up is only ½ the solution. You should also periodically test the integrity of your backup process by trying to restore a file/folder from a backup. This will assure that in the event of an emergency you can successfully restore your data. At one organization that I was called in for a consultation I requested that the Network Administrator restore a directory from a week ago. After waiting several hours he had to admit to me that although he was successfully backing up the computers it appeared that there was a problem doing a restore. The problem was the tape drive was failing so that it looked like it had successfully backed up, but only garbage was being written to the tape. In effect this organization had no backups, as they had rotated all their tapes since the failure started to occur. Obviously the moral of this story is:

“A Good Backup Without a Good Restore is a Useless as a Newborn Baby”

COMPUTER MALWARE PROTECTION

With all the computer security problems that can occur it is necessary for you to be proactive in protecting your computer. There are some basic issues that need to be addressed to help alleviate this problem. They are:

1. Microsoft Windows Vulnerabilities
2. Virus, Worms & Trojan Horses Protection
3. Firewall Protection
4. Adware/Spyware Protection
5. Unwanted Attention
6. Identity Theft



MICROSOFT WINDOWS VULNERABILITIES

My experience with classified government computer projects has taught me that it is not possible to build a secure computer system as an afterwards. You must plan for security at the start of the project, and throughout the development and maintenance process. Even then you will have potential vulnerabilities, as computer systems development is a human process, and humans make mistakes. Unfortunately Microsoft Windows was not developed with security in mind, as security has always been an afterwards at Microsoft, as a nature of the process. Security takes time and money to implement, and Microsoft needed to get product and product improvements to market. Therefore they tried to do as much as possible under the market constraints (cost and schedule) they were working under, but that has proven to be not good enough under the relentless attacks of computer hackers.

So the question is what can be done under these circumstances. Microsoft is issuing patches to correct security vulnerabilities as soon as they are detected, and counter-measures can be developed. Unfortunately the lag time between detection and patch can be several hours to several days, leaving your computer open to potential attacks. Also, the patches may have unintended consequences (both good and bad) to the Microsoft Windows Operating System, and the applications that run under Microsoft Windows. Sometimes these patches cause more problems with Microsoft Windows and Microsoft Windows applications than they may alleviate. Given the endless combinations of interactions of software on your computer you cannot predict the impact of a patch, you can only test it on every computer to which it is to be applied. This testing can take several hours to several weeks to accomplish, and still would not be complete and accurate. This is not practical for small organizations, and even large organizations have problems with this approach.

So what is a small organization to do about this situation. In most cases you apply the patch and hope for the best. If your computers are configured for standard organizations applications (Microsoft applications such as Word, Excel, Power Point, Outlook, and Internet Explorer) the risk of adverse impacts will be minimized. If you have other applications running on your computers (such as accounting, database, and specialized software) your risk is often greater. In all cases you should apply the patch and then start each application installed on your computer. After starting the application you should do a

few basic functions within the application to assure that they are working correctly. If no problems are encountered you can continue your organizations operations with the patch applied. Just be more alert to the possibility of something going wrong within the application, or Microsoft Windows itself, that could be as a result of the patch.

As always, before you make any changes to your operating system and applications, you should have a good backup of your computer(s) before proceeding. Given that you have a good backup before proceeding, apply the patch to every computer in your organization, and test the basic functionality of all your applications on every computer, this process can take quite some time to accomplish. If you are like many small organizations that have a five to ten computer network this can be quite an involved an expensive effort. Often it can take one-half to one-full day to accomplish this effort. Considering that Microsoft is issuing patches at a rate of five or six a month you may wish to setup a schedule of patching that will reduce this effort to once or twice a month, applying only critical patches as advised by Microsoft and other experts.

VIRUS, WORMS & TROJAN HORSES PROTECTION

The next issue is computer viruses. I have often said, and I will repeat it here:

“It is much easier, AND CHEAPER, to prevent virus’s from getting into your computer, than it is to remove them from your computer.”

It has also been said that:

“You may be able to remove a virus from a computer, but you may not be able to fix the damage that the virus did to your computer.”

With the virus threat being so much greater today than ever before it is doubly important that every computer is protected by anti-virus software. Not only do you need this protection, but you absolutely need to keep your virus definitions up-to-date, and to make sure that your anti-virus software is not out-of-date. The effort required to remove a virus from your computer, *if it is even possible*, costs much more than if you had kept your protection up-to-date. Not only is there the cost of the virus removal, but also the cost of the lost usage of you computer during the virus removal process. Add to this the possibility of potential data loss due to the virus activities, and the cost of restoring the data from a backup, the cost of virus removal can become expensive and time consuming. In some cases it is more simple, and better, to simply wipe out the disk drive contents and restore the computer to the way it was before the virus attacked. This disk restoration process often take three to nine hours to accomplish, and causes much aggravation for the computer user, as they will often lose settings and parameters within their computer applications.

Modern anti-virus software incorporates a process of automatic retrieval and updates of the virus definition from the Internet. Your anti-virus software should be configured to do this at least every week, if not daily. You should also train your computer users to be able to perform this update manually, as you may wish to do this immediately upon hearing of a virus outbreak that concerns you.

No matter how careful you may be with anti-virus updates there is a time lag between the discovery of a new virus, and the development of a virus definition to protect you from it. This is simply a risk inherent in utilizing computers in today's world.

FIREWALL PROTECTION

Ahoy Their

So why do you need a firewall if your virus protection is up to date. The analogy I wish to use is that of pirates and privateers. Imagine that your computer is a ship on the ocean called the Internet. There are many other ships on this ocean, most of them friendly, some indifferent, and a few malevolent. Those in the malevolent category are pirates and privateers. Pirates directly attack your ship to destroy, loot, and/or sink it, which is equivalent to a virus attacks on your computer. Privateers sneak onto your ship to take control of it and use it for their purposes, which is what a computer firewall attempts to prevent.

You need to install, learn and use both your virus and firewall protection software to protect your ship on the ocean of the Internet. Also, just as you need to keep your virus protection software up-to-date to prevent a pirate attack on your ship, so you need to keep you firewall software up-to-date to prevent a privateer takeover of your ship.

A firewall monitors and controls the computer network traffic between your computer and other computers (principally Internet computers). The firewall can be a hardware or software solution, or a combination of both a hardware and a software solution to accomplish this monitoring. It may reside on every computer in your organization, or on the connection between your computer network (your Local Area Network - LAN) and the Internet connection of your organization. If it resides on every computer it controls both Internet and LAN connections to the computer. If it only resides between the Internet and your LAN it only controls Internet traffic on your computers.

The problem the Firewall is trying to correct is unauthorized communications from the Internet to your computers. A Trojan Horse computer attack is not really a virus, and sometimes cannot be detected by anti-virus software. This type of attack exploits vulnerabilities in Microsoft Windows and other application programs on your computer to establish a direct connection from your computer to a hackers computer. After this communication is established the hackers computer instructs your computer to do various malicious operations. A Firewall, properly configured, restricts network communications to authorized software on your computer or computers on the LAN or Internet.

It is critical for all computers to have a Firewall installed and configured properly. These types of attacks are becoming more frequent and destructive. It is also possible for these attacks to steal information that resides on your computers. The problem with Firewalls is to properly configure them for your computer network environment. You must be knowledgeable and aware of the network communications software that resides on your computers, so as to allow them to perform their functions through the Firewall. It is surprising how many different software programs have network communications within them. When installing a modern Firewall it often scans your computer for network software so that you can authorize them to perform their network communications functions. Often this scan reveals hundreds of programs on your computer that performs network communications. Besides Internet browsing and E-mail there is Internet update software for most of the application programs installed on your computer, as well as dozens of Microsoft Windows routines to perform network communications. You should only allow network communications for those software programs that you know have a

legitimate purpose. While a Firewall is monitoring your network traffic it may encounter an unauthorized access attempt, at which point it will query the computer user to allow or disallow the network communication. It is important that the computer user make a knowledgeable decision on this network communication. It is also possible for the computer user to allow this type of network communication to occur in the future without the warning (which is a reasonable thing to do in many cases). However, if the computer user allows the network communications when they should not have (due to lack of knowledge or a simple human mistake) you have defeated the purpose of the Firewall, and potentially allow the hacker access to your computer. It is therefore it is just as important that your computer users be instructed in the proper utilization of a Firewall, as well as the proper utilization of Anti-Virus software.

ADWARE/SPYWARE PROTECTION

Adware/Spyware is software installed on a computer without the user's knowledge which gathers information about the user for later retrieval by whomever controls the spyware. Spyware can be broken down into three different categories, surveillance spyware, advertising spyware, and Browser Help Objects. Surveillance spyware includes key loggers, screen capture devices, and mouse click activities. These would be used by corporations, private detectives, law enforcement, intelligence agencies, suspicious spouses, etc. to keep track of what you are doing on your computer. Advertising spyware is software that is installed alongside other software or via activex controls on the internet, often without the user's knowledge, or without full disclosure that it will be used for gathering personal information and/or showing the user ads. Advertising spyware logs information about the user, possibly including passwords, email addresses, web browsing history, online buying habits, the computer's hardware and software configuration, the name, age, sex, etc of the user. Spyware and Adware uses the CPU, RAM, and resources of the user's computer, making the user pay for the costs associated with operating it. It then makes use of the user's bandwidth to connect to the internet and upload whatever personal information it has gathered, and to download advertisements which it will present to the user, either by way of pop up windows, or with the ad banners of ad-supported software. All of this can be considered theft in the cases of advertising spyware that installs without disclosure. Who are the main purveyors of spyware? The biggest culprits in spreading spyware are the popular peer-to-peer programs available today, but anytime you download and install anything onto your computer, or accept a free offer from a web site, you may also be installing spyware. Usually the fine print of the agreement you have to accept to utilize their products or services allows them to install spyware on your computer.

Browser Help Objects (BHO) are normally a good thing for you to have installed inside your browser, as they assist you in effectively browsing the Web. However, malicious BHO's have appeared that installs itself via a rogue pop-up window. They then monitor the text you enter into forms on Web pages, including when you enter your username, password, and credit card information into log-on forms at shopping web sites and at online banks. Once installed, the program acts as a BHO where it can snatch data from your online Web surfing sessions and send it anywhere it wants.

THE PROBLEM WITH SPYWARE

My objection to spyware is not just the loss of privacy. That's bad enough. What is also repulsive are the methods these organization use to present users with their advertisements. They spawn pop up and pop under ads, latch onto the web browser like leeches to force the start and search pages to their "partner" sites, make advertisements out of plain text on web sites where they have no arrangement with the author of the content. Often these advertisements are pornographic in

nature and make no allowance for underage users who may be using the computer. Let me quote two people whose browsers were hijacked:

Mark..... I am attaching a copy of my internet temp file where the sites I was hijacked to are located.....this was not the site that did the hijacking, as we had never opened any porn sites--we don't know how we got hijacked.....we called our internet service provider this morning, who walked my husband through 30 minutes of steps, found an "hta" file, and a "kernel" in the start-up mode, deleted both, and everything seems to be working now.....I still have the "hta" file in my recycle box, and can send that to you to if you'd like (I just don't want to infect your system!!!) This is really a disgusting thing to have happen.....my TEN YEAR OLD daughter is the one who first opened the Internet when our home page came up with the porn, and it was terrible!!! The bigger problem was that every few minutes, more porn pages would open by themselves!!!! Note: After this situation occurred, the leading anti-virus software makers determined that the file in question is a virus and is now a target of most anti-virus software.

Yes, that site was disgusting, and the poor client endured more than that. When I checked out their temporary Internet files, he had something like 40 - 50 temp files from different child porn sites all time stamped within about 4 minutes. Because that one page he was directed to didn't have a close button and because he had no clue how to end a task via the task manager, he was clicking all over the place trying to "get out." When he called me in a panic at work, he was saying, "every time I close one window, 5 more pop-up!" What's really sad is what he said to me last night. He said if it hadn't been for me, he would have thrown the PC out. He said there is no way he could have taken it to computer repair shop and let them think he was into child porn. I tried to assure him that they see this crap all the time and know how it works. The site we were discussing was full of graphics of nude young girls who are obviously not 18 years old. Some of them hadn't gone through puberty yet. I was tempted to report this web site to the FBI, but it was down the next time I checked. I think such methods of generating revenue are disgusting.

The other problem is that as the number of spyware programs have multiplied so has the number of these tasks that are loaded into your computer. I have had some clients who's computer had so much spyware active that the only activity the computer was capable of performing was spying on them (their computer essentially locked up spying on them). Other clients have had their computers slowed down significantly due to the activities of spyware.

WHAT CAN BE DONE ABOUT SPYWARE

What Can Be Done About Spyware

1. Eliminate Spyware, and
2. Prevent Spyware.

1) Eliminating Spyware can be done by scanning your computer for installed Spyware and removing it. There are several commercial packages that can do this, and there are also freeware software packages that are also some of the best software for eliminating Spyware. The best packages are constantly changing as vendors improve their products. Once a product is installed and configured it should automatically download and install the latest spyware definitions and protect

your computer from spyware. These programs will then scan your hard drives, inform you of Spyware they have found, and give you the option of deleting all or some of them. You should install one of these programs and learn how to use it properly. You should also, just like virus definition protection, update their Spyware definitions on a regular basis and rerun the program after the update.

2) Preventing Spyware can be more difficult. If you download and run freeware or shareware programs from the Internet they will often contain Spyware. You should be very careful to read the license and installation information to determine if they will install Spyware. Use [EULAlzyer](#) to automatically analyze license agreements. EULAlzyer automatically discovers if the software you're about to install displays pop-up ads, transmits personally identifiable information, uses unique identifiers to track you, or much much more. EULAlzyer can analyze license agreements in seconds, and provide a detailed listing of potentially interesting words and phrases. If they do so you may wish to consider not installing them, and looking for a substitute. There are also several commercial programs that scan for Spyware during a download and prompt you if you wish to allow the download. You should install one of these packages (often the same package as discussed in item 1), then learn how to use them properly. You should also, just like virus definition protection, update the Spyware definitions on a regular basis.

Most of the commercial Anti-Virus/Firewall programs now include Spyware protection in their packages. I expect that this protection will become standard in every program in the very near future - but don't wait for this as you need the protection now. It is also advisable to have a standalone Adware/Spyware package that can check your computer on demand, so that if your standard package does to detect something the stand alone package will detect TBG (The Bad Guys). This dual protection should not be real time protection, as real time protection is provided by your standard package.

As always beware of using these utilities - they often deal with the internals of Windows. If you are not sure of what you are doing than using these utilities could cause problems with your computer. Use them at your own risk.

UNWANTED ATTENTION

SPAM

Many of my clients are amazed about how many people think they need to have various body parts enlarged, they suffer from numerous sexual dysfunctions, need to pump their bodies full of over-the-counter medicines and herbal concoctions, have excess monies that need to be expended on games of chance, and desire to see the human body in inartistic states of undress. Despite federal laws meant to reduce these e-mail messages the quantity of these messages is increasing. The reason for this is simple: the sponsors make money even with a very high rate of rejection. This is because the expense of sending these e-mails is very, very low, while even if less than one half of one percent respond the profit is very high. As the internet is international even if laws could restrict these messages, the message senders could move offshore to some third or fourth world nation and send these messages without much risk of facing these laws.

Not only do my clients suffer the aggravation of receiving these messages, but they must spend time weeding them out to get to the important e-mail messages. There are many other reasons why these types of e-mail are harmful to the internet

as a whole, but that need not be discussed here. The important question is what can be done to reduce your burden? The answer is simple but involved - obtain, install, and use an anti-spam utility. Most of these spam utilities review your e-mail before you see them, determine if it is spam, then move the spam to a separate e-mail folder or to the trash folder.

The problem is that this process is not 100% effective, and can incorrectly tag some good e-mail as spam (false positives). As much as these utilities try to thwart spam, the spam senders try to thwart the anti-spam utilities. This tug-of-war between the spammers and anti-spammers is the same between the virus writers and the anti-virus utilities. And just as you need to keep your anti-virus software up-to-date you need to keep your anti-spam software up-to-date. You also need to know how to utilize your anti-spam utility to its maximum effectiveness. Most anti-spam utilities allow you to "train" the utility as to which e-mail is good and which is probably spam. You should do this as well as review the configuration setting of your anti-spam to set them to your environment. You also need to get into the habit of review the spam messages to determine the false positives, and train your anti-spam to tag these e-mails. Another helpful tip is to populate your e-mail address book with valid e-mail address. You can then set your spam filter to accept all e-mails that are in your address book.

As always the initial learning curve and training of the utility takes more time than if you manually deleted the spam messages. However, if you learn and use your anti-spam software you will save yourself much effort in the future. I currently receive about 200 e-mail messages a day. About 100 are valid (I'm on a lot of e-mail newsletter and alert lists), and the rest are spam. Of the spam all but five to ten are correctly identified as spam, and my false positives are about one per week. It takes me less than two minutes to review and delete my spam messages (simply by looking at the subject and sender of the e-mail). I save myself a lot of time and aggravation by utilizing my anti-spam utility to its greatest extent.

PHISHING

PHISHING attacks involve the mass distribution of 'spoofed' e-mail messages with return addresses, links, and branding which appear to come from banks, insurance agencies, retailers or credit card organization. These fraudulent messages are designed to fool the recipients into divulging personal authentication data such as account usernames and passwords, credit card numbers, social security numbers, etc. Because these emails look "official", many of the recipients may respond to them, resulting in financial losses, identity theft, and other fraudulent activity.

You may have already received a message from us alerting you to these scams. Unfortunately, these crimes are STILL common -- and require your vigilance. There are some tips to help you protect yourself:

1. NEVER send your password, credit card number, secret word, or PIN in an email.
2. When you receive an email that directs you to a Web page asking for your personal information, please **USE CAUTION!!!** The email may direct you to a Web site that looks like it's from a legitimate organization with which you do organizations, but in reality the site has been created by a criminal to steal your personal information. Furthermore, a link may show one Web address -- but direct you to another. You should always type the Web address directly into the address bar of your web browser rather than clicking the link.

3. If you think you have already submitted sensitive information in response to a fraudulent email, please contact your bank and/or credit card organization immediately. They will be very helpful in resolving the problem in regards to your bank account and/or credit card.

POP-UPS

Pop-ups are those annoying windows that appear when you click somewhere on the web. Sometimes they are in front of the website, and at other times they are in back of the web site and are not visible until you close the web browser. Most of the time they are advertisements for things you don't need. The good news is most web browsers and/or toolbars have pop-up protection. The bad news is that the protection is not perfect, but is sufficient for most users. However, there are types of pop-ups that cannot be eliminated. These include, but are not limited to animated ads and small information windows. The best way to handle pop-ups is to configure your pop-up blocker properly. For the pop-ups that cannot be stopped the best advice I can give is to just close them (and sigh).

WEB SITE FILTERING

Many organizations are concerned that users be protected/restricted from inappropriate web sites, as well as chat rooms. Web site filtering attempts to do this by blocking known inappropriate web sites, or searching for inappropriate key words in unknown web sites or chats. They often have controls for each user of the computers, as well as categories of content to be blocked. While not perfect (TBG are always trying to fool the filtering system), they do provide for some comfort to the organization. The bad news is you need to learn the ins-and-outs of the filtering software that you utilize, in order to properly restrict access to web sites and chat rooms. If you are concerned about what is being viewed on your computer(s) you should obtain web site filtering software.

WEB BROWSING ALERTS

Many Internet security suites are adding site advisors to their software tools. A site advisor works by providing you with a visual clue as the known safety of a web site. The visual clue is often a color indicating the known characteristics of a web site – red for dangerous, green for a safe site, and yellow for an unknown site. Training yourself and your computer users to keep an eye out for this visual clue of your site advisor will often prevent TBG from doing their dirty work.

E-MAIL

Attachments and Hyper Links Oh My!

One of the most frequent, and easy way for your computer to be infected is through e-mail attachments and hyperlinks. Opening an attachment can invoke a Virus or Trojan attack. Clicking on a hyperlink to a web site can do the same. Even if you have a good security package protecting your computer it is still possible for your computer to become infected (as explains in Zero Day Exploits in the next section). One phenomenon that has become quite obvious from the vast numbers of virus victims is that people click first and ask questions later. Maybe we're inspired by the false belief that firewalls, antivirus software, and anti-spyware programs protect us from all viruses, worms, and intrusive programs. But even the best of these shields can't always protect you from your biggest security threat: yourself.

Curiosity killed the cat, and sometimes it ropes us into launching viruses, gobbling spam, installing browser-disabling add-ons, or even forking over credit card numbers and passwords. You're probably smarter than that, but I'll bet you have a credulous friend or relative who needs a wake-up call.

“Think Before You Click to Avoid Viruses, Trojans, and Scams!”

To Unsubscribe or Not To Unsubscribe - That Is The Question.

Is it safe to use an "unsubscribe" link to stop getting e-mail from a particular sender? Or will clicking the link just get you more spam?

One firm's executives have studied this question extensively — and the answer they found is very likely to surprise you. They tested 27,719 separate unsubscribe links that were included in various e-mails the organization has processed. The resulting statistics appear prominently on the firm's home page: only 484 (1.7%) are "abused links" that will send you more spam if you enter your e-mail address. Another 2,712 (9.8%) are "dishonored" links, which appear to function but don't actually accomplish anything, good or bad.

Your task as a computer user is to avoid the 1.7% of unsubscribe links that are in fact operated by spawn of the Devil. Some helpful hints are:


- Do unsubscribe from any ordinary, authentic e-mail newsletter that you may once have subscribed to but now no longer want;
- Don't bother unsubscribing from spam messages, just delete them, because in almost every case the unsubscribe link won't work — there is simply no good way to get off a spam list; and
- you can't tell whether the message in front of you is a respectable e-mail newsletter or spam, go ahead and click its unsubscribe link. Your organization's blockade of the 1% that are bogus will protect you from making an error.

WHAT CAN BE DONE ABOUT ALL THIS COMPUTER MALWARE

So what is a organization to do about solving this problem of Computer Malware. The first and foremost thing you can do is educate yourself and the other people in your organization about the problems, and the solutions that are implemented in your organization. Training for your computer users on the proper use of the security solutions implemented in your computer environment is essential. You then need to regularly schedule updates to your Microsoft Windows software, Anti-Virus Definitions, Anti-Spyware Definitions, and Firewall software. This schedule must keep in mind the costs of doing upgrade, this as well as the potential negative impacts of the changes that may occur as a result of the upgrades. You must also be prepared to implement an emergency reaction to a severe computer threat, to proactively prevent it from affecting your computer environment. All this must occur after a through audit of your current computer security environment is conducted, and the resolution of the computer security issues uncovered by the audit is implemented.

All of this takes time and money to implement, but consider the time and money that could be potentially lost if your computer environment is successfully attacked. Ask yourself if the cost of preventing the attack is worth the cost of recovering from an attack, and even if your organizations could survive a severe attack. Then take the actions necessary to protect your organizations and your computer environment.

Keep in mind that even if you did all the things that I recommend your computer can still be impacted. This is because no matter how good your protection is the hardware/software you utilize to protect yourself is *not* 100% effective. This is because it was designed by humans, and humans make errors or omissions. There is also the problem of zero-day exploits. Zero-Day exploits are defines as new malware that evades your protection before your software knows about the malware. After new malware is released the protection service must identify it, develop counter measures, and implement them on your computer. This effort can takes hours, if not days or weeks to accomplish – and if your are infected before this happens you have what's called a Zero-Day infection. Zero-Day exploits are another reason to keep your protection software up-to-date, as you need to obtain the latest protection so as to reduce the chances of a malware infection.



KNOW YOUR COMPUTER

In order to configure and maintain your computer you need to know your computer. Knowing your computer is knowing the internal components of your computer equipment and operating system. This will assist you in troubleshooting when things go wrong (and they will go wrong). If you use telephone support the technician at the other end will ask you to do many of the things overviewed here.

You can also use this knowledge to re-configure the look and feel of your computer. You should be very careful if you do this as it can negatively affect how your computer works (or doesn't work).

Every computer user should be familiar with the following utilities and procedures (the run name is in parenthesis- depress the Windows Key and "R" simultaneously on the keyboard to invoke the Run command, then enter the run name and depress OK):

SYSTEM PROPERTIES (SYSDM.CPL)

System Properties can be invoked by using the System Control Panel or right clicking on "My Computer" and choosing "Properties". It can be used to do the following:

- View and change settings that control how your computer uses memory and finds certain information.
- Find information about hardware and device properties, as well as configure hardware profiles.
- Report system and program errors to Microsoft when they occur.
- You can change performance options that control how programs use memory, including paging file size, or environment variables that tell your computer where to find some types of information. Startup and recovery options indicate which operating system your computer uses when it starts and which actions it performs if the system stops unexpectedly.
- Information about hardware and devices is also available in System. Use the Add Hardware Wizard (Windows XP) or Devices and Printers (Windows Vista or 7) Control Panel to install, uninstall, or configure certain types of hardware. Device Manager shows you which devices are installed on your computer and allows you to change device properties. You can also create hardware profiles for different hardware configurations.
- You can report system and program errors to Microsoft so they can track and address the errors.
- You must be logged on as an administrator to the local computer or have appropriate network privileges to make certain changes.

TASK MANAGER (TASKMGR.EXE)

Task Manager provides information about programs and processes running on your computer. It also displays the most commonly used performance measures for processes. You can use Task Manager to monitor key indicators of your computer's performance, and you can quickly see the status of the programs that are running and end programs that have stopped responding. To activate Task Manager right click on the task bar and choose "Task Manager", or press Ctrl-Alt-Del on your keyboard.

SYSTEM INFORMATION (MSINFO32.EXE)

System Information displays a comprehensive view of your hardware, system components, and software environment. The system information that is displayed is organized into three top-level categories that correspond to the following nodes on the console tree:

- Hardware Resources: This node displays hardware-specific settings, namely direct memory access (DMA), IRQs, I/O addresses, and memory addresses. The Conflicts/Sharing node identifies devices that are sharing resources or that are in conflict. This can help identify problems with a device.
- Components: This node displays information about your Windows configuration and is used to determine the status of your device drivers, networking, and multimedia software.
- Software Environment: This node displays a snapshot of the software loaded in computer memory. You can use this information to see if a process is still running or to check version information.

COMPUTER MANAGEMENT (COMPMGMT.MSC)

Computer Management is a collection of administrative tools that you can use to manage your computer. It combines several administration utilities into a console tree, and it provides easy access to administrative properties and tools. To activate Computer Management right click “My Computer” and select “Manage”. You can use Computer Management to:

- Monitor system events, such as logon times and application errors.
 - Create and manage shared resources.
 - View a list of users connected to a local or remote computer.
 - Start and stop system services, such as Scheduled Tasks and Indexing Service.
 - Set properties for storage devices.
 - View device configurations and add new device drivers.
 - Manage applications and services
1. System Tools is the first item in the Computer Management console tree. You can use the default tools, Event Viewer, Shared Folders, Local Users and Groups, Performance Logs and Alerts, and Device Manager, to manage system events and performance on the target computer.
 2. Storage is the second item in the Computer Management console tree. It displays storage devices that are installed on the computer that you are managing. You can use the default tools, Removable Storage, Disk Defragmenter, and Disk Management, to manage the properties of storage devices.
 3. Services and Applications is the third item in the Computer Management console tree. It contains several default tools to help you manage services and applications on the target computer. For example, you can use Services to view and manage the properties of the Plug and Play service.

MS CONFIGURATION (MSCONFIG.EXE)

Built into Windows XP, Vista and 7 is a special tool called the "Microsoft System Configuration Utility" or simply "MSCONFIG." Designed to help you troubleshoot problems with your computer, MSCONFIG can also be used to ensure that your computer boots faster and crashes less. Most people know that the more programs you have running on your computer at once, the more likely it is that your computer will either run slowly or even crash. What most people don't know is that every time you boot your computer a whole mess of "hidden" programs load in the background. Some of these hidden programs are essential, but most aren't. Turning off some of these hidden programs can significantly increase your computer's performance and reliability.

REGISTRY (REGEDIT.EXE)

The Windows registry is the repository for virtually every setting on your system. Many of these settings can be accessed through Control Panel applets or other utilities. But others only can be changed by directly editing the registry, and this can be dangerous. If you make a mistake in applying a tweak, you can cause problems instead of solving them. And unless you remembered to back up the branch of the Registry that you're editing, you may not be able to undo the tweak. Changing the registry settings will affect how your computer behaves. It could also cause your computer to crash. The best advice is that if you don't know what you're doing in the system registry - *DO NOTHING!!!*

BIOS (BASIC INPUT/OUTPUT SYSTEM)

BIOS is built-in software that determines what a computer can do without accessing programs from a disk. On PCs, the BIOS contains all the code required to control the keyboard, display screen, disk drives, device communications and many miscellaneous functions. The way to access a computer's BIOS differs amongst various manufacturers, but it can usually be done by pressing the DEL key, CTRL+ALT+ENTER, or a function key such as F2 during startup. Check your manufacture's web site for how to access your BIOS. Checking the BIOS is a key component of troubleshooting a PC. Changing the BIOS settings will affect how your computer behaves. It could also cause your computer to crash. The best advice is that if you don't know what your doing in the BIOS - *DO NOTHING!!!*

CONTROL PANELS

The control panels in Windows contain many of the operating system's important settings. You should be familiar with what options can be located in each of the control panels and how to change them. The best way to learn is just to browse the control panels on your computer. Below is a list of the more important Windows control panels. Control panels are named slightly differently in every version of Windows, but the options are generally similar.

ADD NEW HARDWARE (WINDOWS XP), ADD HARDWARE (WINDOWS VISTA)
DEVICES AND PRINTERS (WINDOWS 7)

This control panel is used for adding new hardware. Often, Windows will automatically detect new hardware and guide you through the installation process. If it does not, use this control panel to install the hardware.

ADD/REMOVE PROGRAMS (WINDOWS XP), PROGRAMS AND FEATURES (WINDOWS VISTA
OR 7)

This control panel is the appropriate place to uninstall programs that did not come with their own uninstaller. Simply deleting files or folders is not a good way to remove an unwanted program. This control panel also allows you to control which Windows Components are installed - you can free up resources by removing unnecessary components.

FOLDER OPTIONS (WINDOWS XP), DEFAULT PROGRAMS (WINDOWS VISTA OR 7)

This control panel determine with program will open a file that you have double clicked. If you ever double clicked a file and the wrong program was started you need to visit this control panel to reset the file extension (i.e. .doc, .xls, .jpg, .xml, etc).

SYSTEM -> HARDWARE TAB -> DEVICE MANAGER BUTTON (WINDOWS XP),
DEVICE MANAGER(WINDOWS VISTA OR 7)

This control panel displays all the devices that are installed on your computer. Double clicking on a device name will open the property sheet for the device and allow you to make changes or update the drivers for the device.

FOLDER OPTIONS (WINDOWS XP & VISTA & 7)

With Folder Options, you can specify how your folders function and how content is displayed. For example, you can indicate that you want your folders to display hyperlinks to common tasks, other storage locations, and detailed file information. You can also choose to open items with either a single or a double click.

ADMINISTRATIVE TOOLS -> PERFORMANCE (WINDOWS XP),
PERFORMANCE INFO & TOOLS (WINDOWS VISTA OR 7)

Use this control panel to view the performance of your computer

DISPLAY (WINDOWS XP), PERSONALIZATION (WINDOWS VISTA OR 7)

This control panel allows you to control the appearance of your computer. You can change your background wallpaper and screen saver, select the display resolution and change the color scheme. It also control many of the aspects of your video card. It can be invoked by using the Display Control Panel, or by right clicking on the desktop background and choosing "Properties".

POWER OPTIONS (WINDOWS XP & VISTA & 7)

In this control panel are the options for power saving features (which are especially important on a laptop). You can have your computer go into "sleep" or "hibernate" mode and shut off its monitor or hard drive, saving power when you are away from the computer.

NETWORK CONNECTIONS (WINDOWS XP), NETWORK AND SHARING CENTER (WINDOWS VISTA OR 7)

This control panel allows you to review and configure your network settings. The command line tool "ipconfig /all" are also available to review your current network setting in a concise (techie) format.

TASKBAR & START MENU (WINDOWS XP & VISTA & 7)

Use this control panel to configure menu options such as: always display the Start menu on top, hide the Start menu, show the clock, and use personalized menus, and to customize the Start menu and taskbar.

SYSTEM (WINDOWS XP & VISTA & 7)

This control panel contains the system's general information. It tells you the exact version of your operating system as well as how much RAM the system has. It also provides a Device Manager for viewing what hardware or virtual devices may be causing problems (the Device Manager also allows you to update hardware drivers). More advanced system configuration tools can be found in this control panel, though changing them is not recommended without a full understanding of their effects.

USERS (WINDOWS XP), USER ACCOUNTS (WINDOWS VISTA OR 7)

This control panel is used for creating and modifying local user accounts, as well as setting and changing passwords.

POWERTOYS (WIN XP)

Free yourself from the tyranny of ordinary Windows with this extra set of tools created by Microsoft developers. Adjust menu speed and window animation. Move the StartUp folder up the Explorer hierarchy, or move the My Documents folder to another drive. If you get the "No Help topic is associated with this item" message when you access the help menu, Tweak UI may have answers.

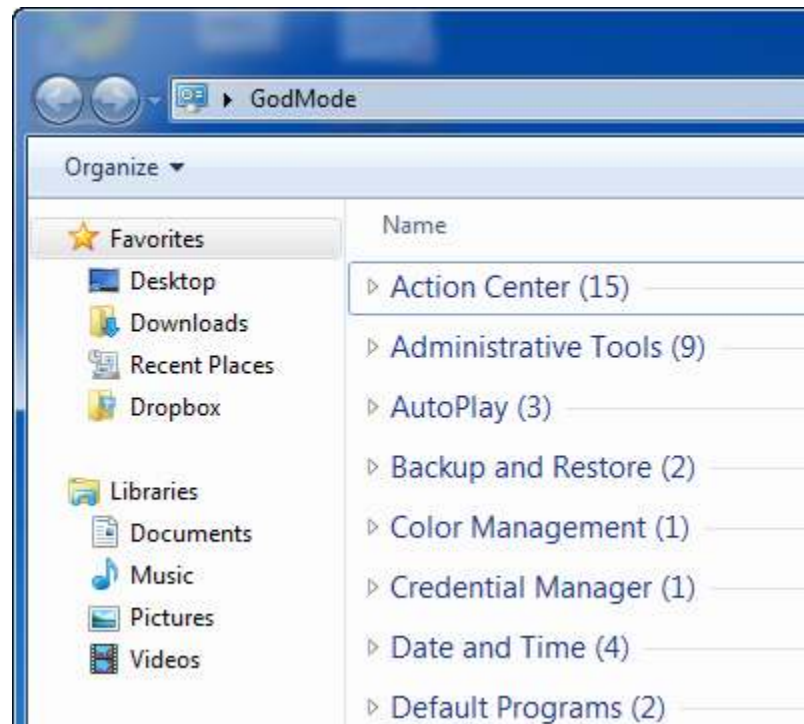
GOD MODE (WIN VISTA & 7)

Are you frustrated that you can't tweak Windows Vista or 7 as much as you'd like? This trick was recently published on [CNET](#) which exposed a nifty trick that lets you manage your entire [operating system](#) from a single window. The trick involves creating a folder with special parameters that converts a regular folder into an extended control panel. This window lets you perform over 270 different activities. Sound settings, Speech Recognition, Taskbar and Start Menu settings, Firewall, Defender, User accounts, etc. You name it and boom, its there!

Alright, enough of talk, time for some action! Follow the steps to enable GodMode on Windows 7 or Vista

1. Create a new folder (anywhere on the computer)
2. Rename the folder to **"GodMode.{ED7BA470-8E54-465E-825C-99712043E01C}"**

Once the folder is renamed and if done right, the folder icon will change automatically. Click-open the folder to see all the settings and options.



This trick is known to work on 32 and 64 bit versions of Windows Vista and Windows 7, however, Windows Vista is a little faint at heart and often crashes when enabled Godmode.

In case your system crashes login to Safe Mode ([Windows XP](#), [Windows Vista](#), or [Windows 7](#)) and delete the Godmode folder and restart normally.

SIW - SYSTEM INFORMATION FOR WINDOWS

Now that you know the standard Microsoft tools for knowing your computer you will appreciate the following *free* utility for obtaining information about your computer. Please note that you cannot change anything with this utility as you can with Control Panels.

SIW is an advanced ***System Information for Windows*** tool that gathers detailed information about your system properties and settings and displays it in an extremely comprehensible manner.

The **system information** is divided into few major categories:

- **Software Information:** Operating System, Installed Software and Hotfixes, Processes, Services, Users, Open Files, System Uptime, Installed Codecs, Software Licenses (Product Keys / Serial Numbers / CD Key), Secrets (Password Recovery).
- **Hardware Information:** Motherboard, Sensors, BIOS, CPU, chipset, PCI/AGP, USB and ISA/PnP Devices, Memory, Video Card, Monitor, Disk Drives, CD/DVD Devices, SCSI Devices, S.M.A.R.T., Ports, Printers.
- **Network Information:** Network Cards, Network Shares, currently active Network Connections, Open Ports.
- **Network Tools:** MAC Address Changer, Neighborhood Scan, Ping, Trace, Statistics
- **Miscellaneous Tools:** Eureka! (Reveal lost passwords hidden behind asterisks), Monitor Test, Shutdown / Restart.
- **Real-time monitors:** CPU, Memory, Page File usage and Network Traffic.

I would recommend you download and run this tool. Save the information if finds for future reference or troubleshooting.

MAINTAINING YOUR PC

WHY IS MY COMPUTER SO SLOOOOOOW

Most of us remember the excitement of getting a new computer. With its faster processor, more memory, and larger/faster disk drive (in addition to all the other frills) we were excited by how much more we could do in the same amount of time. Over the years many of my clients have complained that their computer appears to be slowing down. As a piece of electronic (and electro-mechanical) equipment this seems to be counter-intuitive. Although it is counter-intuitive it is accurate – your computer is slowing down. It is not slowing down because the equipment is getting old, but rather it is slowing down because you are asking it to do much more. You may wonder how this can be since you have not really added much to your computer since you purchased it and had it installed. In reality you actually have added much to your computer, but most of it is behind the scenes.

Behind the scenes your computer is a busy beaver. It constantly collects information on what you are doing, and saves it in something called the Registry. The Registry is a database of information about the internals of your computer and software. When you add software or hardware, change settings for Windows or your software, and many other ordinary tasks, the Registry must be updated. The Registry must also be accessed when you are working with your computer and software. As time goes on the Registry becomes larger and larger, and therefore takes longer to access and update. It is also unfortunate that when you remove hardware or software the Registry information is not removed, or only partially removed, which adds to the complexity of the Registry and increases the effort to access and update it.

You are also, behind the scenes, adding patches and fixes to Windows itself, as well as to your virus protection software. This is done to protect your computer from malicious attacks, but you are asking your computer to do more work behind the scenes to protect you. The more work your computer does behind the scenes the less work it can do for you, in the same slice of time. This makes it appear that your computer is slower because you are doing less, but the computer is still working as hard as it ever did. If you add to this mix a firewall, anti-spam software, various utilities and system add-ons you can see that your computer is very busy behind the scenes.

Another problem that is occurring on many of my clients computers is adware and spyware (please see the section of this booklet on "Spyware Protection" for more information). Many of you have accidentally installed adware and spyware when visiting a website or downloading freebies from the Internet. This activity is usually hidden from you behind the fine print in a "Terms of Agreement" that you authorized. This adware/spyware is working behind the scenes to capture what you are doing, report it to some Internet site, and bombard you with unwanted advertisements. Some of my client computers have slowed almost to a stop by having dozens of adware/spyware programs active on their computers.

There is also the issue of Windows Memory Management. The memory available on your computer is limited, and the more things happening simultaneously on your computer the more memory your computer needs. When Windows runs low on memory (and it often does run low) it takes a piece of currently unused memory (a page) and writes it to your disk drive (swaps it out), freeing that memory page for other uses. When it needs the page that is on the disk drive it swaps out another unused memory page, and swaps in the old pages (a process known as swapping). This process of paging and swapping is known as memory juggling. The more Windows has to memory juggle behind the scenes, the less time it has to do what you requested, which appears to you as a slowdown of your computer.

Regularly schedule maintenance is important for the health and speed of your computer. By scanning and defragging your hard disk, as well as performing a disk cleanup, you can prevent trouble as well as "speed up" your computer. This "speed up" occurs as a result of removing temporary files from your computers disk drive, then reorganizing the contents of the disk drive to increase the efficiency of reading and writing to the disk drive. Given current disk drive technology this "speed up" gain will be modest but helpful. For more information on this subject please see the section of this booklet on "Maintaining Your PC" for more information.

The final item that makes your computer appear to be slower is your own expectations. As you have used your computer more and more, learned how to utilize it better, become more accustomed to its capabilities, and called upon it to do more for you, your own level of patience with your computer has been reduced. Because you are less patient with your computer your computer seems to be slower.

So what can be done about speeding up your computer. Given all of the items mentioned above your options can be limited. If the problem resides in your registry there are various utilities that can slim down and optimize the registry. The problem with these registry utilities is that due to the complexity of the Registry you must know what you are doing in order not to alter or remove any registry entries that could be important to the operation of your computer. If you make a mistake you could cause your computer to crash or be inoperable. Also, given the size of the Registry it could take some time to review the utilities recommendations then apply the fixes.

If the problem is because of the fixes, patches, and updates for Windows and the various utilities on your computer there is not much that can be done. It may be possible to disable some of the utilities, or reduce the options within the utilities, but this could cause more difficulties than it corrects. The real question is whether this to upgrade your computer or not. Please refer to the section of this booklet "To Upgrade Or Not To Upgrade" for more information.

The issue of adware and spyware can be address by obtaining a good Adware/Spyware removal program. Just as with anti-virus software you will have to update the adware/spyware definitions on a regular basis, then run the program after the updates are applied (Please refer to the section of this booklet "Spyware Protection" for more information).

Regularly scheduled maintenance on your computer will address the other technical issue mentioned in this essay. Each computers environment is different so that it is difficult to even given general information on what should be done during a regular scheduled maintenance. You should modify the "Standard Preventive Maintenance" checklist (provided later in this booklet) to suit your own needs.

As to the issue of your expectations the only choice is to lower your expectations, upgrade your computer, or purchase a newer, faster, computer. Lowering your expectations is the easier and cheaper alternative, but I have found it has a higher failure rate than the other alternatives. You could upgrade your computer, but the cost of the upgrades, and the time to install and configure them, could make this impracticable. The only upgrade that I regularly recommend is to increase the amount of memory (RAM) in your computer (to reduce memory juggling). Depending on the original amount of memory this could make a large difference in the apparent speed of your computer. The final alternative is to purchase a newer, faster computer. Given the cost of computers today this may or may not make economical sense. Please refer to the section of this booklet "The Real Cost of a New Computer" for more information.

PREVENTATIVE MAINTENANCE

Preventive maintenance is very important to the smooth operation of your system. It can even reduce the need for a service call from your local computer tech, or the need to purchase new equipment. Preventive maintenance is more than just kicking up some dust. In the old days—you know, 10 years or so ago—support people periodically went around to all the organization computers to do preventive maintenance. The job consisted mainly of blowing the dust out of the keyboard, taking the cover off the computer and blowing the dust out of the box, and running ScanDisk. Sometimes you also brought a patch or fix disk to install on the user machines. Preventive maintenance nowadays amounts to bumping into a user and asking, "Everything going okay?" Bigger and better hard drives don't need to be defragmented as often as the older, smaller drives. And most of the software updates take place over the network. You should use preventive maintenance to keep your users computers up and running smoothly.

So what's does a support pro to do for preventive maintenance on user machines? Here's a checklist of things they do to try to keep your users happy and their computers working smoothly.

- Check the Date & Time. Remember to verify the computer date and time. If it is considerably off consider the possibility that the CMOS battery is running down or dead. Replace the battery if you are suspicious.
- Reboot the computer. In some organizations the computer are left on all the time. While you're there, reboot the system to force a memory reset and to make sure the machine will boot when you're not there in person. Consider powering down for a minute, change the CMOS Battery, clean the interior with canned gas, check all power and equipment connections, and then reboot.
- Check the network hardware. It is also necessary to check and reboot hubs, routers, switches, and print servers from time to time. They contain memory that needs to be flushed and have connections that can work loose. Most networks have a server reboot schedule but forget about the other, just as vital, network kit.
- Check the connections. Users love to move their equipment around. Make sure all the plugs are snug in their connections.
- Check the power sources. Make sure systems are plugged into protected outlets or surge protectors, if not a UPS (Uninterruptible Power Supply).
- Check the fan. Remember to check that the CPU's cooling fan is working and that the airflow isn't impeded by dust, walls, partitions, furniture, etc..
- Bring that can of air! It's still a good idea to blow the dust and debris out of keyboards every now and then. And make sure there isn't dust accumulating on the back of the machine or wherever the air fan is located.
- Clean the mouse. It never hurts to make sure the mouse is free of dust and grime. Even if it is an optical mouse the laser window and glide pads need to be cleaned.
- Clean the screens. Do your users a favor and bring the appropriate screen-cleaning cloth or solution with you on the preventive maintenance visit.

- Check the printers. Print a test page on your users' printers. Make sure the printers are producing clean copies, and that the toner cartridges aren't about to run out.
- Test the memory and review the hard drive status report. Replace if necessary.
- Backup the registry, clean-up the registry, then optimize the registry
- Confirm that backups are being done. Do you have a solution for automatically backing up the computer? If so verify that it is working properly and on schedule. If not—and if you're relying on end users to back up their own files—ask users when the last backups were done. Remember to verify the backups by trying to restore a sample file or folder.
- Run Windows or Microsoft Update and review all updates available for installation. Install updates as appropriate.
- Update the BIOS and Equipment drivers. Also update the non-Microsoft system utilities you are utilizing on your computer.
- Update and run the anti-virus, anti-spyware/adware, and firewall software. Make sure your users know how to update the computer malware software.
- Check the logs of the computer malware software to determine if problems have occurred. Educated the user on the computers where problems have occurred.
- Check the Event Viewer. In Windows XP & Vista use the Windows Event Viewer to check the system and application events, to determine if the computer is encountering errors that need to be addressed.
- Check the System Configuration. Run a startup manager, task manager, and services manager to check out what is being done on the system. Modify the settings to remove anything that is not required.
- Update any miscellaneous software (see Standard Preventive Maintenance checklist that follows) utilized by your computer.
- Update the audit information. Update the audit information about the computer. Remember to record the physical equipment configuration, the Windows environment, the network settings, and the application software installed on the computer.
- Delete temporary files. Before running a defragmenter, I like to delete all the temporary files that have been created. It will surprise most people to learn how much hard drive space has been used by temporary files. Use a Disk Cleanup utility to search out and clean out these files.
- Run a disk scan and defragmenter on the hard drives as needed. If your Windows users aren't running these utilities themselves, it doesn't hurt to check the disk and make sure the number of disk errors and the percentage of fragmentation are within acceptable limits. Otherwise run a disk scan and defragger on the hard drives.

Make a list and check it twice. A checklist of the activities to be performed for Preventive Maintenance

Standard Preventive Maintenance

- Perform Reboots
 - Computers & Monitors
 - Check System Date/Time
 - Replace CMOS Battery (if necessary)
 - Canned Air Blast Interior and Vents
 - Check Fan(s)
 - Network Equipment
 - Router
 - Modem
- Equipment Checkup
 - Cabling
 - Power Connections
 - Equipment Connections
 - Test UPS
 - Cleaning
 - Keyboard
 - Mouse
 - Monitor
 - Printer
 - Other Devices
 - Testing
 - Memory Test
 - Hard Disk Check
- Registry Backup & Optimize
 - Registry Backup
 - Clean Out Registry
 - Registry Optimize
- Backup Logs Review
 - Review Backup Logs
 - Update Backup Software
 - Run Backups as Required
- Equipment Updates
 - BIOS
 - Drivers
- Security Review
 - Firewall Logs
 - Anti-Virus Logs
 - Anti-Spyware Logs
- HijackThis Review
- System Utilities Update
 - Disk Cleaner Update
 - Disk Defragger Update
 - File Undelete
- Security Updates
 - Microsoft Updates
 - Firewall Updates
 - Antivirus Updates
 - Adware/Spyware Updates
- Miscellaneous Updates
 - Acrobat Reader
 - QuickTime
 - RealPlayer
 - Windows Media Player
 - Shockwave Player
 - Flash Player
 - Air Player
 - Java Runtime
- Reviews
 - Windows Event Logs
 - Startup Items Review
 - Processes Review
 - Installed Programs Review
- Finalization
 - Disk Cleanup
 - Restart Computer
 - Audit Computer
- Security Scans
 - Anti-Virus Scans if necessary (update before scan)
 - Anti-Malware Scan if necessary (update before scan)
- Disk Maintenance
 - Disk Cleanup
 - Chkdsk /r
 - Defrag Analysis
 - Defrag Run (if necessary)

SCHEDULED TASKS

You should set, *and keep*, a list of recurring maintenance tasks. Just as you should maintain your car on a regular basis you should maintain your computer on a regular basis. Be sure that you have a good backup of your disk and registry before you do all but the Daily Task mentioned below. Some suggested tasks and their frequency is as follows:

Daily Tasks

BUN: "Back Up Now" – I use QuickBooks for my financial needs and Goldmine for my Customer Relations needs on an almost daily basis. You may have other items that you utilize on a fairly regular basis. It is always a good idea to backup these types of applications after you have done some worked on them (I utilize a USB Flash Drive for this purpose). Before you exit from one of these programs you should run the backup supplied with the program. If no backup is supplied you should run a synchronization of the data files you just modified. So:

BUN: "Back Up Now"

SOS: "Save Often Stupid" – If I am doing a large quantity of work in a program I often backup or save when I am done a logical group of the work. This way if the computer should freeze or crash (which has happened to me) I will not have to re-do the work – I can restore from the backup point-in-time. A freeze is the computer not responding, a crash is an error message that forces you to abort or restart your computer. It will happen to you on several occasions during the course of utilizing your computer. So:

SOS: "Save Often Stupid"

The question is how often should you BUN or SOS. The answer is another question – "If the computer should freeze or crash on me now how aggravated would I be if I didn't BUN or SOS?". If the answer is you would be very aggravated then the action to take is BUN or SOS.

Weekly Tasks

Disk Cleanup – Fire up your Disk Cleaner and get rid of all the junk that has accumulated on your computer since the last time you ran the disk cleaner. It is absolutely amazing how much junk is created in the normal course of utilizing your computer. The Windows Operations System, your browser, and your application programs all utilize temporary files and folders to perform their work. They should delete these temporary files when they are finished, but they sometimes run into problems and they do not delete these temporary files. All this junk accumulates until you delete it with a disk cleaner. At a new client I visited and ran the disk cleaner they had 4.2 GB (that's right – over four Gigabytes) of junk to remove. Not only does running a disk cleanup free up disk space but it also will "speed-up" your computer by unclogging the arteries of this junk. These junk folders are also areas for TBG to install adware/spyware, viruses and Trojans. Cleaning out the junk files and folders will therefore assist in securing your computer. If you run a disk cleaner on a weekly basis it should only take a few minutes to delete these files/folders. The first time you run the disk cleaner it will take considerably longer, as it has to get rid of more junk that it would if you had run it on a weekly basis.

Disk Backups – Backups, Backups, Backups need to be done on a regular basis (see the section on Disaster Recovery in this booklet). Setup your backups to run on an overnight basis as sometimes it may take a few hours to backup, and this way backups will not interfere with your normal computer tasks.. You may also wish to automatically backup on a Friday Night and Monday morning – thereby protecting your computer for the weekend work that you may do.

Security Scans – Your computer should be scanned weekly for any security threats that may have snuck into your computer. As this scanning can take several hours I often automatically schedule it for an overnight scan. Review the results of the scan to determine if you had any security problems, then take the proper corrective actions so that it doesn't happen again.

Windows and Microsoft Updates are often configured to check for Critical and Security updates on a daily basis. While this gets the most important items updated on a regular basis there are other items (Software Optional and Hardware Optional) that need to be installed. I would recommend you check weekly to determine if you need any addition updates for your computer. Start Windows (or Microsoft) Update from the start button, click the "Custom" button, and review the Software Optional and Hardware Optional items to determine if you need or want to install them. Just make sure you have a good backup before you start the installation.

Monthly Tasks

Software Updates – You should check if any of your software requires updates (see the section on "To Upgrade or not to Upgrade" in this booklet). Use a program to automatically check for software updates, then download and install the updates.

Disk Monitoring – Check your disk monitor monthly to assure that there are minimal errors on your disk drive so you are assured that all is ok.

Process Monitoring - Fire-up your process monitor after you restart your computer a make sure that no process are active that you don't know and approve of.

Startup Monitoring – After checking your process monitor you should check what startup items are installed on your computer. Disable any that you don't know and approve of, then restart your computer.

Installed Programs Monitoring – Look at your installed programs for any that you don't know and approve of. Uninstall those that you do not want or no longer need.

Event Log Review – Start your event log reviewer and check any warnings and errors you find to determine if you need corrective actions such as a reinstall, update or removal of programs.

Equipment Cleaning – Clean the exterior of your equipment with approved cleaning pads (available in the computer section of office supply stores). Blow on the vents of your computer with electronics air (available in the computer section of office supply stores) to remove the dust and hair that accumulates.

Mouse & Keyboard - Pick up your keyboard and tilt it away from the computer, then use the electronic air between all of the keys to remove any dust, dirt, crumbs, hair etc.. Also. even if you have an optical mouse clean the laser

window with the cleaning pad, as well as the glide pads of the mouse (this will remove the stickiness feeling of your mouse movements).

Monitor – Clean the monitor with approved cleaning pads (mentioned earlier). Be careful not to scratch the monitor, or press too hard on an LCD monitor.

CD/DVD & External Media Readers – Open your CD/DVD tray and blow approved air (mentioned earlier) into the tray opening. Do the same for any media readers you may have in your computer. This will remove any dust, dirt, crumbs, hair etc..

Printers – Follow the manufacturer's instructions on how to clean your printer.

Quarterly Tasks

Disk Scans – Do a "Chkdsk" on all your drives to find and fix any bad sectors that may reside on your disk drive.

Registry Cleanup & Compress – Use your registry cleaner to remove any unneeded entries, then compress the registry (see [*ERUNT - The Emergency Recovery Utility*](#) for more information).

Disk Defragment – Fragmentation refers to the condition of a disk in which files are divided into pieces scattered around the disk. Fragmentation occurs naturally when you use a disk frequently, creating, deleting, and modifying files. At some point, the operating system needs to store parts of a file in noncontiguous clusters. This is entirely invisible to users, but it can slow down the speed at which data is accessed because the disk drive must search through different parts of the disk to put together a single file. So Defrag your disks quarterly.

Semi-Annual Tasks

Restore Verification – Rename one of your folders that has a few files in it. Then start your backup program and restore the folder. Do the same for an individual file on your computer. Check to make sure that your folder and file was recovered properly.

Driver Updates – Visit your manufacturer's web site to determine if there are any driver updates your computer needs. Then download and install the updates.

Bios Updates – While looking for driver updates at your manufacturer's web site check to see if there are any BIOS updates that need to be applied. Carefully read the instructions, and follow them to the letter, before you start any BIOS updates.

Yearly Tasks

Equipment Cleaning – You should take the cover off your computer and tilt it down and away from all the other equipment surrounding it. Then blow electronics approved air into the case to remove any dust, dirt, crumbs, hair etc. that may be inside your computer. Make sure the fans inside your computer have air blown into them as to also clean out the dust, dirt, crumbs, hair, etc. in the fans.

TO UPGRADE OR NOT TO UPGRADE, THAT IS THE QUESTION

With the advent of high speed, always on, internet connections most software vendors provide automatic notifications of when updates or upgrades are available for your software. Microsoft has “Windows Update” that notifies you when new fixes and security patches, driver updates, and enhancements are available for your computer. Likewise the major virus protection vendors do the same for their products. In addition the application software vendors are starting to do the same thing for their products. All of these updates, fixes, and enhancements often not only change their specific products, but have impacts on the Operating System of your computer. Most of the time these impacts are beneficial, but on occasion they may have a detrimental effect. This is all due to the complexity and interactions of the modern computer environment.

Several times I have been called upon by my clients to resolve problems that they have encountered with their computers as a result of this complexity. The downloading and installing of various patches and fixes to their computers hardware and software has resulted in the introduction of new problems. These problems often are not obvious, are difficult to trace down and correct, and in some cases are not repairable due the nature of the interaction of all the components within your computer environment. Many times it has taken me hours to track down these problems, than many more hours to repair them even when it was possible to do so.

So the question is “Should I upgrade my computer when these items become available?”. The answer is always a difficult one. You must be proactive in protecting your computer from security threats, correct problems that may be impacting your computer, but you need to be careful not to introduce other problems into your computer environment. In today’s environment it is best for a small organization to do the upgrades and hope for the best, but be prepared for the worst. Make sure that your backup is current before the upgrade is applied (see the section of this booklet on “Disaster Protection”). Always keep in mind, after the upgrade, to be alert for possible problems the upgrade may cause

Application Software Upgrades vs. Updates – what is the difference, and why should I care? Well the quick answer is that updates normally includes patches (including security patches), or minor enhancements to the software that are available at no charge. Upgrades are major improvements to the software, and are often and additional cost. You can tell the difference by the version scheme that most software developer utilize. When you click on the Help -> About menu item of your software you often see “Program Name – Version 2.4.6”. The first number (2) informs you of the upgrade version you are using. The second number (4) is the update version of the software. The third number (6) is the software build number and is of little value to the user, but important if you require technical support from the vendor.

Should you care? Yes you should! Updates can often solve minor problems that you may be experiencing, or provide enhancements that you can utilize. It is often best to obtain and install updates. Upgrades are major changes that will be a cost item, as well as the time required to learn the new functionality or interface changes. Generally I recommend that you investigate if the upgrade will provide you with enhancements that you can utilize. If so I would recommend that you obtain the upgrade and install it.

In all cases (updates or upgrades) make sure that your backup is current before the upgrade is applied (see the section of this booklet on “Disaster Protection”). Always keep in mind, after the update or upgrade, to be alert for possible problems the upgrade or update may cause

THE REAL COST OF A NEW COMPUTER

Many of my clients have also started to upgrade their old computers to new computers. While the price of new computers has decreased dramatically, the efforts to re-install their application software, peripherals such as printers and external devices, as well as utilities such as Antivirus and Firewalls has to be taken into account in the price of a new computer upgrade. You can also add to this the effort to move your data and settings from the old computer to the new computer. In addition many of the older software does not work on the newer Windows Operating System computers, so there is the cost of upgrading the older software to newer versions.

The effort to install the new computer, attach the old equipment, install and configure the application software and utilities, move the old data and settings to the new computer, and perform the updates for Windows, Security Software and Application Software, then remove the old computer can often take up to a day (sometimes more) to accomplish. Due to the complexity of modern computer systems, and the quantity of items to be installed, and unexpected problem that may occur, it is not possible to estimate the effort required to perform these actions. This cost in either your time spent, or hiring a consultant to do it for you, must also be factored into the cost of a new computer.

TOOLS FOR YOUR PC

STANDARD WINDOWS TOOLS:

The following tools are built into Windows XP, Vista, or 7, and provide basic functionality. As with all Microsoft Windows tools they can be cumbersome and difficult to use, and may not provide all the functionality that you may require. The next table provides alternative tools to the standard Windows tools. Clicking on the tool name will redirect you to a web site with a good explanation of how to utilize the tool. The run name is in parenthesis (depress the Windows Key and "R" simultaneously on the keyboard to invoke the Run command, then enter the run name and depress OK):

	Windows XP	Windows Vista	Windows 7
Utilities:			
Backups	<u>Backup</u> (ntbackup.exe)	<u>Backup & Restore Center</u> (sdclt.exe)	<u>Backup & Restore Center</u>
Disk Cleanup	<u>Disk Cleanup</u> (cleanmgr.exe)	<u>Disk Cleanup</u> (cleanmgr.exe)	<u>Disk Cleanup</u> (cleanmgr.exe)
Disk Scans	<u>Check Disk</u> (chkdsk volume:/r)	<u>Check Disk</u> (chkdsk volume:/r)	<u>Check Disk</u> (chkdsk volume:/r)
Disk Defragmenter	<u>Disk Defragmenter</u> (Dfrg.msc)	<u>Disk Defragmenter</u> (dfrgui.exe)	<u>Disk Defragmenter</u> (dfrgui.exe)
Memory Test	<u>Memory Diagnostic</u>	<u>Memory Diagnostic</u>	<u>Memory Diagnostic</u>
Diagnostics:			
System Information	<u>System Information</u> (Msinfo32.exe)	<u>System Information</u> (Msinfo32.exe)	<u>System Information</u> (Msinfo32.exe)
System Configuration	<u>Tweak UI Powertoy</u>	God Mode	God Mode

	Windows XP	Windows Vista	Windows 7
Task Managers	<u>XP Task Manager</u> (taskmgr.exe)	<u>Vista Task Manager</u> (taskmgr.exe)	<u>7 Task Manager</u>
Startup Managers	<u>System Configuration Manager (msconfig.exe)</u>	<u>System Configuration Manager (msconfig.exe)</u>	<u>System Configuration Manager (msconfig.exe)</u>
Networking	<u>Network Diagnostics</u>	<u>Network Diagnostics</u>	<u>Network Diagnostics</u>
Memory / Process Tweaking	none	none	none
System Restore	<u>System Restore</u>	<u>System Restore</u>	<u>System Restore</u>
Miscellaneous:			
File/Folder Explorer	<u>Windows Explorer</u>	<u>Explorers</u>	<u>Explorers</u>
Desktop Search	<u>Windows Search</u>	<u>Windows Search</u>	<u>Windows Search</u>
Updates:			
Windows Updates	<u>Windows Update</u>	<u>Microsoft Update</u>	<u>Microsoft Update</u>
Software Updates	Vendor Web Site	Vendor Web Site	Vendor Web Site
Driver Updates	Manufacturer Web Site	Manufacturer Web Site	Manufacturer Web Site
BIOS Updates	Manufacturer Web Site	Manufacturer Web Site	Manufacturer Web Site

	Windows XP	Windows Vista	Windows 7
Protection:			
Support Utility/Security Monitor	<u>Windows Security Center</u>	<u>Windows Security Center</u>	<u>Windows Security Center</u>
Anti-Adware/Spyware	<u>Windows Defender</u>	<u>Windows Defender</u>	<u>Windows Defender</u>
Anti-Virus	<u>Malicious Software Removal Tool</u>	<u>Malicious Software Removal Tool</u>	<u>Malicious Software Removal Tool</u>
Firewall	<u>Windows Firewall</u>	<u>Windows Firewall</u>	<u>Windows Firewall</u>
Anti-Malware	<u>Microsoft Security Essentials</u>	<u>Microsoft Security Essentials</u>	<u>Microsoft Security Essentials</u>
Registry Tools:			
Registry Editor	<u>Registry Editor</u> (regedit.exe)	<u>Registry Editor</u> (regedit.exe)	<u>Registry Editor</u> (regedit.exe)
Registry Backup & Restore	<u>System Restore</u>	<u>System Restore</u>	<u>System Restore</u>
Registry Optimize	none	none	
Registry Cleanup	none	none	

Computer Management (MMC)

The **Microsoft Management Console (MMC)** is a component of the Windows Operating System that provides system administrators and advanced users with a flexible interface through which they may configure and monitor the system. The management console can host one or more modules which are COM components called snap-ins. Most of Microsoft's administration tools included with both Windows itself, and Windows Server System products are implemented as MMC "snap-ins". Third parties can also implement their own snap-ins using the MMC application programming interfaces published at MSDN. The Snap-Ins that are common across both Windows XP, Vista and 7 are:

Authorization Manager	(azman.msc)
Certificates	(certmgr.msc)
Component Services	(comexp.msc)
Computer Management	(compmgmt.msc)
Device Manager	(devmgmt.msc)
Disk Management	(diskmgmt.msc)
Event Viewer	(eventvwr.msc)
Shared Folders	(fsmgmt.msc)
Local Users and Groups	(lusrmgr.msc)
NAP Client Configuration	(napclcfg.msc)
Performance Monitor	(perfmon.msc)
Services	(services.msc)
SQL Server Config Manager	(SQLServerManager.msc)
Task Scheduler	(taskschd.msc)
TPM -Trusted Platform Module	(tpm.msc)
Windows Firewall	(wf.msc)
WMI-Windows Management Info	(wmimgmt.msc)

These MMC's are invoked at the Windows Run Command (Depress the Windows Key and "R" simultaneously to invoke the Run command). Type in the snap-in name and depress "Enter" and it will start the snap-in.

Control Panels (Windows XP)

Each tool in Control Panel is represented by a .cpl file in the Windows\System32 folder. The .cpl files in the Windows\System32 folder are loaded automatically when you start the Control Panel.

Third-party software and hardware manufacturers add Control Panel icons to provide an interface for you to use when you configure settings for their products. An icon is displayed in Control Panel after the program's setup tool places the .cpl file in the Windows\System32 directory.

To create a shortcut to a Control Panel tool, either drag an icon from Control Panel to the desktop or another location and Windows will create a shortcut to the Control panel.

These Control Panels can also be invoked at the Windows Run Command (depress the Windows Key and "R" simultaneously on the keyboard to invoke the Run command). Type in Control Panel name (name.cpl) and press "Enter" on the keyboard and it will start the Control Panel. The names of the standard Windows XP Control Panels are as follows:

File name	Purpose
Access.cpl	Accessibility properties
Appwiz.cpl	Add/Remove Programs properties
Desk.cpl	Display properties
Hdwwiz.cpl	Add Hardware properties
Inetcpl.cpl	Internet properties
Intl.cpl	Regional Settings properties
Irprops.cpl	Infrared Port properties
	(located in C:\Windows\Driver cache\i386\Driver.cab until you install an infrared device)
Joy.cpl	Joystick properties
Main.cpl	Mouse properties
Mmsys.cpl	Multimedia properties
Ncpa.cpl	Network Connections properties
Nusrmgr.cpl	User Accounts properties
Nwc.cpl	Gateway Services for NetWare properties

File name	Purpose
Odbccp32.cpl	Open Database Connectivity (ODBC) Data Source Administrator properties
Powercfg.cpl	Power Options properties
Sapi.cpl	Speech Properties
	(located in C:\Program files\Common files\Microsoft Shared\Speech)
Sysdm.cpl	System properties
Telephon.cpl	Phone and Modem Options properties
Timedate.cpl	Time and Date properties

See Appendix A – Windows XP Control Panels for a batch file that opens all the control panels in alphabetical order.

Control Panels (WINDOWS VISTA)

Windows Vista has significantly increased the number of control panels. Not only has it added control panels, but it has added control tasks that mimic the functionality of Control Panels. These Control Panels / Tasks are invoked at the Windows Run Command (Depress the Windows Key and "R" simultaneously to invoke the Run command). Type in "Control.exe /name " (spacebar at the end) and the name of Control Panel / Task, and press "Enter" on the keyboard and it will start the Control Panel / Task) The names of the standard Windows Vista Control Panels / Tasks are as follows:

Control Panel Item	Canonical name
Administrative Tools	Microsoft.AdministrativeTools
AutoPlay	Microsoft.AutoPlay
BitLocker Drive Encryption	Microsoft.BitLockerDriveEncryption
Color Management	Microsoft.ColorManagement
Date and Time	Microsoft.DateAndTime
Default Programs	Microsoft.DefaultPrograms
Device Manager	Microsoft.DeviceManager
Ease of Access Center	Microsoft.EaseOfAccessCenter
Folder Options	Microsoft.FolderOptions
Fonts	Microsoft.Fonts
Game Controllers	Microsoft.GameControllers
Get Programs	Microsoft.GetPrograms
Indexing Options	Microsoft.IndexingOptions
Internet Options	Microsoft.InternetOptions
iSCSI Initiator	Microsoft.iSCSIInitiator
Keyboard	Microsoft.Keyboard
Mouse	Microsoft.Mouse
Network and Sharing Center	Microsoft.NetworkAndSharingCenter
Offline Files	Microsoft.OfflineFiles
Parental Controls	Microsoft.ParentalControls

Control Panel Item	Canonical name
People Near Me	Microsoft.PeopleNearMe
Performance Information and Tools	Microsoft.PerformanceInformationAndTools
Personalization	Microsoft.Personalization
Power Options	Microsoft.PowerOptions
Programs and Features	Microsoft.ProgramsAndFeatures
Scanners and Cameras	Microsoft.ScannersAndCameras
Sync Center	Microsoft.SyncCenter
System	Microsoft.System
Tablet PC Settings	Microsoft.TabletPCSettings
Taskbar and Start Menu	Microsoft.TaskbarAndStartMenu
Text to Speech	Microsoft.TextToSpeech
User Accounts	Microsoft.UserAccounts
Windows Anytime Upgrade	Microsoft.WindowsAnytimeUpgrade
Windows CardSpace	Microsoft.CardSpace
Windows Defender	Microsoft.WindowsDefender
Windows Firewall	Microsoft.WindowsFirewall
Windows Mobility Center	Microsoft.MobilityCenter
Windows SideShow	Microsoft.WindowsSideShow
Windows Update	Microsoft.WindowsUpdate

See Appendix B – Windows Vista Control Panels for a batch file that opens all the control panels in alphabetical order

Control Panels (WINDOWS 7)

Windows 7 has increased the number of control panels and renamed some of them. Not only has it added control panels, but it has added control tasks that mimic the functionality of Control Panels. These Control Panels / Tasks are invoked at the Windows Run Command (Depress the Windows Key and "R" simultaneously to invoke the Run command). Type in "Control.exe /name " (spacebar at the end) and the name of Control Panel / Task, and press "Enter" on the keyboard and it will start the Control Panel / Task) The names of the standard Windows 7 Control Panels / Tasks are as follows:

Control Panel Item	Canonical name
Action Center	Microsoft.ActionCenter (Windows 7 and later only)
Administrative Tools	Microsoft.AdministrativeTools
AutoPlay	Microsoft.AutoPlay
Backup and Restore	Microsoft.BackupAndRestore (Windows 7 and later only)
Biometric Devices	Microsoft.BiometricDevices (Windows 7 and later only)
BitLocker Drive Encryption	Microsoft.BitLockerDriveEncryption
Color Management	Microsoft.ColorManagement
Credential Manager	Microsoft.CredentialManager (Windows 7 and later only)
Date and Time	Microsoft.DateAndTime
Default Location	Microsoft.DefaultLocation (Windows 7 and later only)
Default Programs	Microsoft.DefaultPrograms
Desktop Gadgets	Microsoft.DesktopGadgets (Windows 7 and later only)
Device Manager	Microsoft.DeviceManager
Devices and Printers	Microsoft.DevicesAndPrinters (Windows 7 and later only)
Display	Microsoft.Display (Windows 7 and later only)
Ease of Access Center	Microsoft.EaseOfAccessCenter
Folder Options	Microsoft.FolderOptions
Fonts	Microsoft.Fonts
Game Controllers	Microsoft.GameControllers
Get Programs	Microsoft.GetPrograms

Control Panel Item	Canonical name
Getting Started	Microsoft.GettingStarted (Windows 7 and later only)
HomeGroup	Microsoft.HomeGroup (Windows 7 and later only)
Indexing Options	Microsoft.IndexingOptions
Infrared	Microsoft.Infrared (Windows 7 and later only)
Internet Options	Microsoft.InternetOptions
iSCSI Initiator	Microsoft.iSCSIInitiator
Keyboard	Microsoft.Keyboard
Location and Other Sensors	Microsoft.LocationAndOtherSensors (Windows 7 and later only)
Mouse	Microsoft.Mouse
Network and Sharing Center	Microsoft.NetworkAndSharingCenter
Notification Area Icons	Microsoft.NotificationArealcons (Windows 7 and later only)
Offline Files	Microsoft.OfflineFiles
Parental Controls	Microsoft.ParentalControls
Pen and Touch	Microsoft.PenAndTouch (Windows 7 and later only)
People Near Me	Microsoft.PeopleNearMe
Performance Information and Tools	Microsoft.PerformanceInformationAndTools
Personalization	Microsoft.Personalization
Phone and Modem	Microsoft.PhoneAndModem (Windows 7 and later only)
Power Options	Microsoft.PowerOptions
Programs and Features	Microsoft.ProgramsAndFeatures
Recovery	Microsoft.Recovery (Windows 7 and later only)
Region and Language	Microsoft.RegionAndLanguage (Windows 7 and later only)
RemoteApp and Desktop Connections	Microsoft.RemoteAppAndDesktopConnections (Windows 7 and later only)
Scanners and Cameras	Microsoft.ScannersAndCameras

Control Panel Item	Canonical name
Sound	Microsoft.Sound (Windows 7 and later only)
Speech Recognition	Microsoft.SpeechRecognition (Windows 7 and later only)
Sync Center	Microsoft.SyncCenter
System	Microsoft.System
Tablet PC Settings	Microsoft.TabletPCSettings
Taskbar and Start Menu	Microsoft.TaskbarAndStartMenu
Text to Speech	Microsoft.TextToSpeech
Troubleshooting	Microsoft.Troubleshooting (Windows 7 and later only)
User Accounts	Microsoft.UserAccounts
Windows Anytime Upgrade	Microsoft.WindowsAnytimeUpgrade
Windows CardSpace	Microsoft.CardSpace
Windows Defender	Microsoft.WindowsDefender
Windows Firewall	Microsoft.WindowsFirewall
Windows Mobility Center	Microsoft.MobilityCenter
Windows SideShow	Microsoft.WindowsSideShow
Windows Update	Microsoft.WindowsUpdate

See Appendix C – Windows 7 Control Panels for a batch file that opens all the control panels in alphabetical order.

ALTERNATIVE WINDOWS TOOLS

The following tools are replacements for the standard Windows tools. I have broken them down into Regular user and Power user. A Regular User is defined as someone who needs the basic functionality, but is not interested in learning the in-and-outs of the tool. A power user is one who wants additional functionality, and is willing to get into the ins-and-outs of the program (although it is not difficult to do this). Some of these tools are low cost, while others are minimal cost items or they request a donation. I would recommend that you purchase from or donate to them if you find them useful, as purchasing/donating to the author will assure that they are maintained and upgraded in the future. Clicking on the tool name will redirect you to a web site of the tool.

	Regular User	Power User
Backups	<u><i>FBackup</i></u>	<u><i>Paragon Backup & Recovery</i></u>
Disk Cleanup	<u><i>CCleaner</i></u>	<u><i>CCleaner</i></u>
Disk Scans	<u><i>Check Disk (XP)</i></u>	<u><i>Check Disk (XP)</i></u>
	<u><i>Check Disk (Vista)</i></u>	<u><i>Check Disk (Vista)</i></u>
	<u><i>Check Disk (7)</i></u>	<u><i>Check Disk (7)</i></u>
Disk Defragmenter	<u><i>Defraggler</i></u>	<u><i>Defraggler</i></u>
Disk Monitor	<u><i>HD Tune</i></u>	<u><i>HD Tune Pro</i></u>
Registry Cleanup	<u><i>CCleaner</i></u>	<u><i>Registry Life</i></u>
Performance Monitor	<u><i>TopStats</i></u> & <u><i>What's Going On</i></u>	<u><i>TopStats</i></u> & <u><i>What's Going On</i></u>
Memory / Process Tweaking	<u><i>FreeRAM XP Pro (WinXP)</i></u> or <u><i>Mz RAM Booster (WinVista)</i></u>	<u><i>FreeRAM XP Pro (WinXP)</i></u> or <u><i>Mz RAM Booster (WinVista)</i></u>
Memory Test	<u><i>MemTest</i></u>	<u><i>MemTest Pro</i></u>
Windows Updates	<u><i>Microsoft Update</i></u>	<u><i>Microsoft Update</i></u>
Software Updates	<u><i>Secunia PSI</i></u>	<u><i>cNet Tech Tracker</i></u>
Driver Updates	<u><i>Driver Max</i></u>	<u><i>Driver Max Pro</i></u>
BIOS Updates	Manufacturer Web Site	Manufacturer Web Site
System Information	<u><i>System Information for Windows</i></u>	<u><i>Belarc Advisor</i></u>
System Configuration	<u><i>Tweak UI Powertoy (XP)</i></u> or <u><i>Ultimate Windows Tweaker (Vista or 7)</i></u>	<u><i>Tweak UI Powertoy (XP)</i></u> or <u><i>Ultimate Windows Tweaker (Vista or 7)</i></u>
Task Managers	<u><i>What's Running</i></u>	<u><i>Process Explorer</i></u>

To Protect & Maintain Your PC 2010

Startup Managers	<u>CodeStuff Starter</u> and/or <u>Startup Lite</u>	<u>Autoruns</u>
Program Managers	<u>CCleaner</u>	<u>Revo Uninstaller</u>
Event Logs Review	<u>EventLogExplorer</u>	<u>EventLogExplorer</u>
Registry Editor	<u>Registrar Registry Manager Lite</u>	<u>Registrar Registry Manager</u>
Registry Back & Optimize	<u>ERUNT & NTREGOP</u>	<u>ERUNT & NTREGOP</u>
All-In-One Tool	<u>Glary Utilities Free</u>	<u>Glary Utilities Pro</u>
Internet Security All-In-One	<u>Norton 360 v3</u>	<u>Norton Internet Security 2010</u>
or		
Spyware Site Protection	<u>SpywareBlaster</u>	<u>SpywareBlaster</u>
Anti-Virus/Spyware/Adware	<u>Avast!</u>	<u>Avast!</u>
Firewall	<u>Outpost Firewall Free</u>	<u>PC Tools Firewall Plus</u>
Hijack Reviewer	<u>HijackThis</u>	<u>HijackThis</u>
Support Utility/Security Monitor	<u>WinPatrol</u>	<u>WinPatrol Plus</u>
Alternative/Secondary Security Scanner	<u>Malwarebytes' Anti-Malware</u>	<u>Malwarebytes' Anti-Malware</u>
File/Folder Explorer	<u>FreeCommander</u>	<u>FreeCommander</u>
File/Folder Locator	<u>Everything Search</u>	<u>Everything Search</u>
Desktop Search	<u>Google Desktop</u>	<u>Copernic Desktop Search</u>
Remove Factory Installs	<u>PC Decrapifier</u>	<u>PC Decrapifier</u>

MISCELLANEOUS TOOLS

The following tools are either freeware or shareware programs that provide additional functionality that is not part of the standard Windows XP, Vista, or 7. I would recommend that you utilize one of these tools in place of the standard Windows tools as they are often better, faster, and more thorough than the Windows tools. Appendix D has equivalent utilities that are part of the PC Magazine Utility Library. Please consult Appendix D for additional information. This Software is available to you either free or for a small cost. Some freeware asks for a small donation, and I would recommend that you donate if you find them useful. Donating to the author will assure that they are maintained and upgraded in the future. Clicking on the tool name will redirect you to a web site of the tool.

MISCELLANEOUS UTILITIES

Application Launcher	<u>LaunchBar Commander</u> or <u>Free Launch Bar</u>
Clipboard Manager	<u>Clipboard Help+Spell</u>
Context Menu Manager	<u>Fast Explorer</u>
Deleted File Recovery	<u>Recuva</u>
Desktop Organizer	<u>Fences</u>
Docks	<u>RocketDock</u> or <u>ObjectDock</u>
Duplicate File Finder	<u>Easy Duplicate File Finder</u>
Duplicate Image Finder	<u>Easy Duplicate Image Finder</u>
Duplicate MP3 Finder	<u>Easy Duplicate MP3 Finder</u>
Easy Folder Access	<u>Fast Folder Access</u>
File(s) Rename Utility	<u>Lupus Rename</u>
File Shredder	<u>File Shredder</u>
File Synchronization	<u>SyncToy</u>
Font Viewer and Manager	<u>AMP Font Viewer</u>
Hide File / Folders	<u>AxCrypt</u>
Print File / Folders	<u>Print Folders</u>
System Tray Manager	<u>TrayManager</u>
Taskbar Manager	<u>TaskBar Commander</u> or <u>Taskbar Control</u>
Typing Expander Manager	<u>RoboType</u> or <u>PhraseExpress</u>
USB Devices Safely Remove	<u>USB Disk Ejector</u>

MISCELLANEOUS PROGRAMS

Alarm Clock / Reminders	<u><i>Kana Reminder</i></u>
Audio Editor	<u><i>Audacity</i></u>
Calculator Enhancement	<u><i>SFR Calculator</i></u>
CD Burning Software	<u><i>CDBurnerXP</i></u>
Dictionary/Thesaurus	<u><i>WordWeb</i></u>
Home Finances	<u><i>AceMoneyLite</i></u> or <u><i>Ace Money</i></u>
Home Inventory	<u><i>Froastbow Home Inventory Pro</i></u>
Image Catalog & Editor	<u><i>Picasa</i></u> and/or <u><i>IrfanView</i></u>
Media Player	<u><i>VLC media player</i></u>
Music Player	<u><i>MediaMonkey</i></u>
Notebook	<u><i>Stickies</i></u> or <u><i>KeyNote NF</i></u>
Painting Tool	<u><i>Paint.net</i></u>
PDF Creator	<u><i>PrimoPDF</i></u>
Personal Information Manager (PIM)	<u><i>EssentialPIM Free</i></u>

INTERNET AIDS

Cookies Viewer	<u>Cookie Viewer</u> or <u>IE Cookies View</u> and <u>Mozilla Cookies View</u>
E-mail Client	<u>Thunderbird</u>
E-Mail Backups	<u>Static Backups</u>
Favorites/Bookmarks Cleaner	<u>AM-DeadLink</u>
Favorites/Bookmarks Backup	<u>FavBackup</u>
Interactive Content Player	<u>Adobe Flash Player</u> and <u>Adobe Shockwave Player</u> and <u>Adobe Air</u>
IP Utilities	<u>HooverIP</u>
Internet telephony & Conferencing	<u>Skype</u>
Java Runtime	<u>Sun Java</u>
Media Player	<u>Quicktime Player</u> and <u>Real Player Basic</u> and <u>Windows Media Player</u>
Password Manager	<u>Password Profiler 2</u> or <u>RoboForm</u>
Portable Document Format (PDF)	<u>Adobe Acrobat Reader</u>
Spam Control	<u>Cloudmark Desktop</u>
Web Browser	<u>Firefox</u>
Web Browser Backups	<u>FavBackup</u>
Web Browser Toolbars	<u>Google</u>, <u>Yahoo</u>, <u>Dogpile</u>
Web Site Filtering	<u>NetNanny</u>

Firefox Add-Ons:

One of the many reasons I recommend using Firefox as your web browser is that it is more secure than Internet Explorer. It is also much more customizable than Internet Explorer. This ability to customize Firefox allows you to add features that make your web browsing easier and faster. Below are some of the Extensions that I have found useful, or that others have recommended to me.

Firefox Extensions That I Use

[**AdBlock Plus**](#)

[**All-In-One Sidebar**](#)

[**Answers**](#)

[**Colorfultabs**](#)

[**Cookie Manager**](#)

[**Download Status Bar**](#)

[**Download Them All**](#)

[**DragNDrop Toolbars**](#)

[**Flash Block**](#)

[**Google Toolbar**](#)

[**GooglePedia**](#)

[**Hyperwords For Firefox**](#)

[**IE Tab**](#)

[**Image Toolbar**](#)

[**Keep My Bookmarks!**](#)

[**Link Alert**](#)

[**Open Bookmarks in New Tab**](#)

[**Pdf Download**](#)

[**ReminderFox**](#)

[**Save File To**](#)

[**Session Manager**](#)

[**Smart Bookmarks Bar**](#)

[**Speed Dial**](#)

[**StatusbarEx**](#)

[**Tabs Menu**](#)

[**Toolbar Buttons**](#)

[**Undo Closed Tabs Button**](#)

[**URL Fixer**](#)

[**Xmarks**](#)

Firefox Extensions That Have Been Recommended

[**Advanced Dork**](#)

[**Autofill Forms**](#)

[**Configuration Mania**](#)

[**Duplicate Tab**](#)

[**Favorite Locations**](#)

[**Fox Marks**](#)

[**Foxy Tunes**](#)

[**Google Lite**](#)

[**Gridplus**](#)

[**Growee**](#)

[**LinkWad**](#)

[**Showcase**](#)

[**Screengrab**](#)

[**Smart Middle Click**](#)

[**StumbleUpon**](#)

[**Tab Clicking Options**](#)

[**Total Toolbar**](#)

Thunderbird Add-Ons:

One of the many reasons I recommend using Thunderbird as your e-mail program is that it is more customizable than Outlook Express or Windows Mail. This ability to customize Thunderbird allows you to add features that make your e-mailing easier and faster. Below are some of the Extensions that I have found useful, or that others have recommended to me.

Thunderbird Extensions That I Use

[*Cloudmark Desktop*](#)

[*Contacts Sidebar*](#)

[*CuteMenus*](#)

[*ImportExportTools*](#)

[*Lightning*](#)

[*MailTagger*](#)

[*Quickfolders*](#)

[*Remove Duplicate Messages*](#)

[*Remove Duplicate Message Alternative*](#)

[*Restart Thunderbird*](#)

[*Return Receipt*](#)

[*Signature Switch*](#)

[*Toolbar Buttons*](#)

[*Xpunge*](#)

Thunderbird Extensions That Have Been Recommended

[*Accounts Export*](#)

[*Message Filter Import/Export*](#)

[*Password Exporter*](#)

The following are the Internet Explorer Add-on that I would recommend every Internet Explorer user install.

Internet Explore Add-ons:

[*IE7Pro*](#)

[*IE Favorites Search*](#)

Appendix A – WINDOWS XP CONTROL PANELS BATCH FILE

To create this batch file open Notepad (notepad.exe) and select the text starting with Access.cpl through Timedate.cpl. Then perform a copy, and paste the clipboard into Notepad. Save the Notepad file as "OpenAll.bat " (be careful that you put a period "." followed by "bat"), in whatever folder you please. Doubling clicking on the OpenAll file will start to open the Control Panels individual. Close the Control Panel that has been opened, and go to the command prompt window (black box window). Pressing the "Enter" on the keyboard will open the next Control Panel. Repeat this until all the Control Panels have opened, or close the command prompt window to exit the batch file (you may also remove a Control Panel name – pause combination to customize this script)

```
.  
  
Access.cpl  
pause  
Appwiz.cpl  
pause  
Desk.cpl  
pause  
Hdwwiz.cpl  
pause  
Inetcpl.cpl  
pause  
Intl.cpl  
pause  
Irprops.cpl  
pause  
Joy.cpl  
pause  
Main.cpl  
pause  
Mmsys.cpl  
pause  
Ncpa.cpl  
pause  
Nusrmgr.cpl  
pause  
Nwc.cpl  
pause  
  
Odbccp32.cpl  
pause  
Powercfg.cpl  
pause  
Sapi.cpl  
pause  
Sysdm.cpl  
pause  
Telephon.cpl  
pause  
Timedate.cpl
```

Appendix B – WINDOWS VISTA CONTROL PANELS BATCH FILE

Follow the same instructions in Appendix A to create this batch file for Windows Vista Control Panels. Again you may also remove a Control Panel / Task name – pause combination to customize this script.

```
control.exe /name Microsoft.AddHardware
pause
Control.exe /name Microsoft.AdministrativeTools
pause
Control.exe /name
Microsoft.AudioDevicesAndSoundThemes
pause
Control.exe /name Microsoft.AutoPlay
pause
Control.exe /name Microsoft.BackupAndRestoreCenter
pause
Control.exe /name Microsoft.BitLockerDriveEncryption
pause
Control.exe /name Microsoft.Bluetooth
pause
Control.exe /name Microsoft.CardSpace
pause
Control.exe /name Microsoft.ColorManagement
pause
Control.exe /name Microsoft.DateAndTime
pause
Control.exe /name Microsoft.DefaultPrograms
pause
Control.exe /name Microsoft.DeviceManager
pause
Control.exe /name Microsoft.EaseOfAccessCenter
pause
Control.exe /name Microsoft.FolderOptions
pause
Control.exe /name Microsoft.Fonts
pause
Control.exe /name Microsoft.GameControllers
pause
Control.exe /name Microsoft.GetPrograms
pause
Control.exe /name Microsoft.GetProgramsOnline
pause
Control.exe /name Microsoft.IndexingOptions
pause
Control.exe /name Microsoft.Infrared
pause
Control.exe /name Microsoft.InternetOptions
pause
Control.exe /name Microsoft.iSCSIInitiator
pause
Control.exe /name Microsoft.Keyboard
pause
Control.exe /name Microsoft.MobilityCenter
pause
Control.exe /name Microsoft.Mouse
pause
Control.exe /name Microsoft.NetworkAndSharingCenter
pause
Control.exe /name Microsoft.OfflineFiles
pause
Control.exe /name Microsoft.PenAndInputDevices
pause
Control.exe /name Microsoft.PeopleNearMe
pause
Control.exe /name
Microsoft.PerformaceInformationAndTools
pause
Control.exe /name Microsoft.Personalization
pause
Control.exe /name Microsoft.PhoneAndModemOptions
pause
Control.exe /name Microsoft.PowerOptions
pause
```

Control.exe /name Microsoft.Printers

pause

Control.exe /name Microsoft.ProblemReportsAndSolutions

pause

Control.exe /name Microsoft.ProgramsAndFeatures

pause

Control.exe /name Microsoft.RegionalAndLanguageOptions

pause

Control.exe /name Microsoft.ScannersAndCameras

pause

Control.exe /name Microsoft.SecurityCenter

pause

Control.exe /name Microsoft.SpeechRecognitionOptions

pause

Control.exe /name Microsoft.SyncCenter

pause

Control.exe /name Microsoft.System

pause

Control.exe /name Microsoft.TabletPCSettings

pause

Control.exe /name Microsoft.TaskbarAndStartMenu

Pause

Control.exe /name Microsoft.TextToSpeech

pause

Control.exe /name Microsoft.UserAccounts

pause

Control.exe /name Microsoft.WelcomeCenter

pause

Control.exe /name Microsoft.WindowsAnytimeUpgrade

pause

Control.exe /name Microsoft.WindowsDefender

pause

Control.exe /name Microsoft.WindowsFirewall

pause

Control.exe /name Microsoft.WindowsSideShow

pause

Control.exe /name Microsoft.WindowsSidebarProperties

pause

Control.exe /name Microsoft.WindowsUpdate

pause

Control.exe /name Microsoft.ParentalControls

Appendix C – WINDOWS 7 CONTROL PANELS BATCH FILE

Follow the same instructions in Appendix A to create this batch file for Windows Vista Control Panels. Again you may also remove a Control Panel / Task name – pause combination to customize this script.

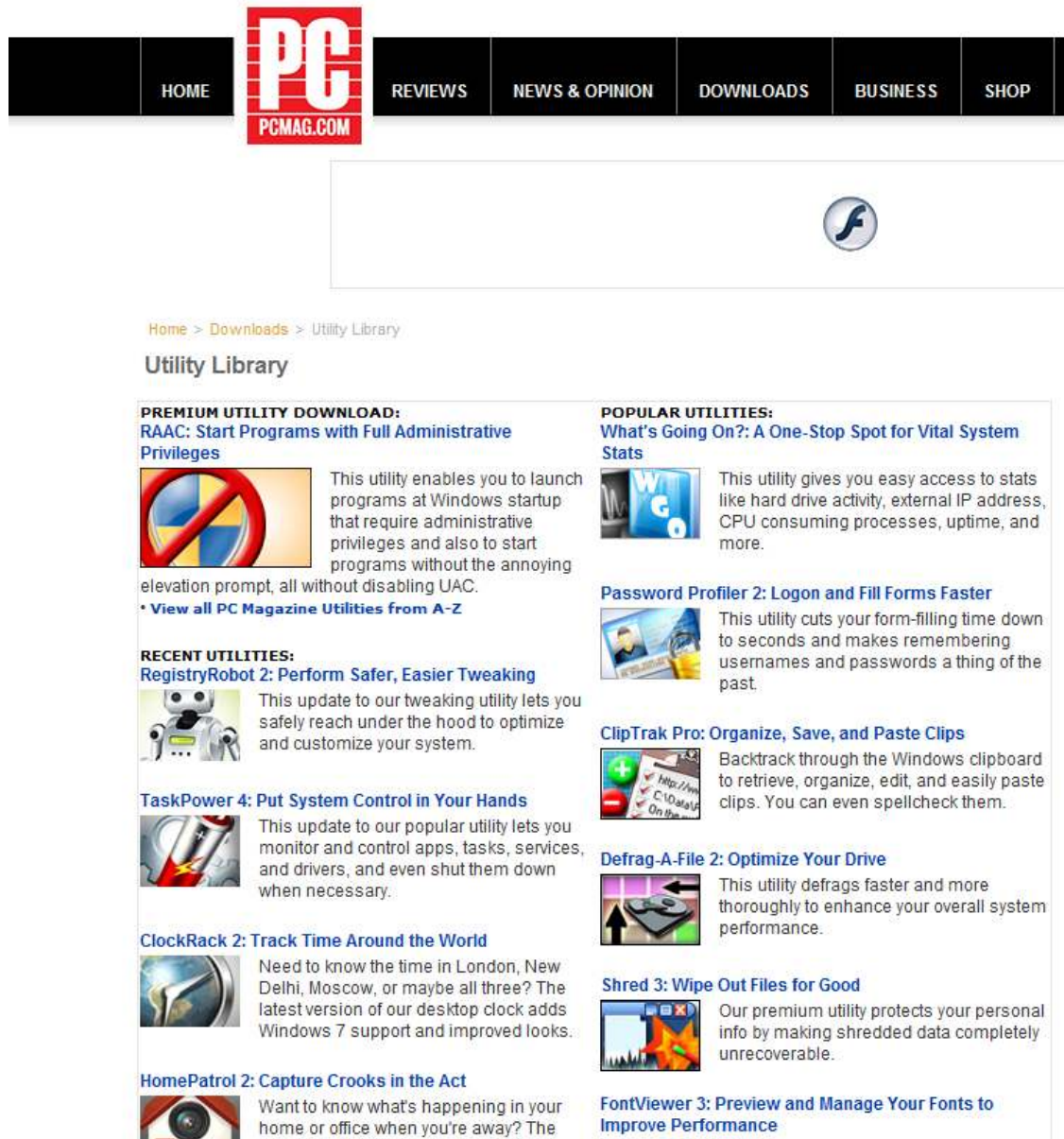
```
Control.exe /name Microsoft.ActionCenter
pause
Control.exe /name Microsoft.AdministrativeTools
pause
Control.exe /name Microsoft.AutoPlay
pause
Control.exe /name Microsoft.BackupAndRestore
pause
Control.exe /name Microsoft.BiometricDevices
pause
Control.exe /name Microsoft.BitLockerDriveEncryption
pause
Control.exe /name Microsoft.ColorManagement
pause
Control.exe /name Microsoft.CredentialManager
pause
Control.exe /name Microsoft.DateAndTime
pause
Control.exe /name Microsoft.DefaultLocation
pause
Control.exe /name Microsoft.DefaultPrograms
pause
Control.exe /name Microsoft.DesktopGadgets
pause
Control.exe /name Microsoft.DeviceManager
pause
Control.exe /name Microsoft.DevicesAndPrinters
pause
Control.exe /name Microsoft.Display
pause
Control.exe /name Microsoft.EaseOfAccessCenter
pause
Control.exe /name Microsoft.FolderOptions
pause
Control.exe /name Microsoft.Fonts
pause
Control.exe /name Microsoft.GameControllers
pause
Control.exe /name Microsoft.GetPrograms
pause
Control.exe /name Microsoft.GettingStarted
pause
Control.exe /name Microsoft.HomeGroup
pause
Control.exe /name Microsoft.IndexingOptions
pause
Control.exe /name Microsoft.Infrared
pause
Control.exe /name Microsoft.InternetOptions
pause
Control.exe /name Microsoft.iSCSIInitiator
pause
Control.exe /name Microsoft.Keyboard
pause
Control.exe /name Microsoft.LocationAndOtherSensors
pause
Control.exe /name Microsoft.Mouse
pause
Control.exe /name Microsoft.NetworkAndSharingCenter
pause
Control.exe /name Microsoft.NotificationAreaIcons
pause
Control.exe /name Microsoft.OfflineFiles
pause
Control.exe /name Microsoft.ParentalControls
pause
Control.exe /name Microsoft.PenAndTouch
pause
Control.exe /name Microsoft.PeopleNearMe
pause
Control.exe /name
Microsoft.PerformanceInformationAndTools
pause
Control.exe /name Microsoft.Personalization
pause
Control.exe /name Microsoft.PhoneAndModem
pause
Control.exe /name Microsoft.PowerOptions
```

pause
Control.exe /name Microsoft.ProgramsAndFeatures
pause
Control.exe /name Microsoft.Recovery
pause
Control.exe /name Microsoft.RegionAndLanguage
pause
Control.exe /name
Microsoft.RemoteAppAndDesktopConnections
pause
Control.exe /name Microsoft.ScannersAndCameras
pause
Control.exe /name Microsoft.Sound
pause
Control.exe /name Microsoft.SpeechRecognition
pause
Control.exe /name Microsoft.SyncCenter
pause
Control.exe /name Microsoft.System
pause

Control.exe /name Microsoft.TabletPCSettings
pause
Control.exe /name Microsoft.TaskbarAndStartMenu
pause
Control.exe /name Microsoft.TextToSpeech
pause
Control.exe /name Microsoft.Troubleshooting
pause
Control.exe /name Microsoft.UserAccounts
pause
Control.exe /name Microsoft.WindowsAnytimeUpgrade
pause
Control.exe /name Microsoft.CardSpace
pause
Control.exe /name Microsoft.WindowsDefender
pause
Control.exe /name Microsoft.WindowsFirewall
pause
Control.exe /name Microsoft.MobilityCenter
pause
Control.exe /name Microsoft.WindowsSideShow
pause
Control.exe /name Microsoft.WindowsUpdate
Pause

Appendix D – PC MAGAZINE UTILITIES


The PC Magazine Utility Library are a collection of PC utilities that may be useful for your particular purpose. A small yearly fee is charged for you to be able to access and download these tools, but it is well worthwhile to subscribe to this service. To see all the utilities that are available click [here](#).





The screenshot shows the PC Magazine Utility Library website. At the top is a navigation bar with links for HOME, PCMAG.COM, REVIEWS, NEWS & OPINION, DOWNLOADS, BUSINESS, and SHOP. Below the navigation bar is a search bar with a magnifying glass icon. The main content area is titled "Utility Library" and contains two columns of utility listings. The left column is titled "PREMIUM UTILITY DOWNLOAD:" and lists several utilities with their descriptions and icons. The right column is titled "POPULAR UTILITIES:" and lists several utilities with their descriptions and icons. The utilities listed include RAAC, RegistryRobot 2, TaskPower 4, ClockRack 2, HomePatrol 2, What's Going On?, Password Profiler 2, ClipTrak Pro, Defrag-A-File 2, Shred 3, and FontViewer 3.


Home > Downloads > Utility Library


Utility Library


PREMIUM UTILITY DOWNLOAD:
RAAC: Start Programs with Full Administrative Privileges
 This utility enables you to launch programs at Windows startup that require administrative privileges and also to start programs without the annoying elevation prompt, all without disabling UAC.
• [View all PC Magazine Utilities from A-Z](#)


RECENT UTILITIES:
RegistryRobot 2: Perform Safer, Easier Tweaking
 This update to our tweaking utility lets you safely reach under the hood to optimize and customize your system.


TaskPower 4: Put System Control in Your Hands
 This update to our popular utility lets you monitor and control apps, tasks, services, and drivers, and even shut them down when necessary.


ClockRack 2: Track Time Around the World
 Need to know the time in London, New Delhi, Moscow, or maybe all three? The latest version of our desktop clock adds Windows 7 support and improved looks.


HomePatrol 2: Capture Crooks in the Act
 Want to know what's happening in your home or office when you're away? The

POPULAR UTILITIES:
What's Going On?: A One-Stop Spot for Vital System Stats
 This utility gives you easy access to stats like hard drive activity, external IP address, CPU consuming processes, uptime, and more.

Password Profiler 2: Logon and Fill Forms Faster
 This utility cuts your form-filling time down to seconds and makes remembering usernames and passwords a thing of the past.

ClipTrak Pro: Organize, Save, and Paste Clips
 Backtrack through the Windows clipboard to retrieve, organize, edit, and easily paste clips. You can even spellcheck them.

Defrag-A-File 2: Optimize Your Drive
 This utility defrags faster and more thoroughly to enhance your overall system performance.

Shred 3: Wipe Out Files for Good
 Our premium utility protects your personal info by making shredded data completely unrecoverable.

FontViewer 3: Preview and Manage Your Fonts to Improve Performance

Appendix E – WHAT DO I USE?

Or "Putting My Money Where My Mouth Is". Many times I have been asked what software do I utilize on my computer. I dread this question as what I use bears no relationship to what a Regular or Power user would normally use. This is because as a Geek and a Support person my computer is loaded with many programs that help me support my clients. However, I just configured a desktop for my wife, and I can inform you what I installed on her computer (as well as some other recommendations). This list of programs has become so long that I have decided to issue it as a separate booklet. You may download this booklet by clicking [here](#).

As many of my clients know I carry around a USB Flash Drive with all the software that I utilized. They often ask me what is on this USB Flash Drive. Most of it is the programs that I recommend, as well as various technical tools that I utilize to problem solve, and many of which I have mentioned in this booklet. Therefore, you either know what is on it or don't need to know as they are very geeky items. However, I have prepared a booklet that highlights the common support utilities I utilize, and that may be of interest to a technically oriented computer user. You may download this booklet by clicking [here](#).

Appendix F – THE KEYBOARD SHORTCUT LIST

What is the allure of keyboard shortcuts? Do they really save time? Why bother since my mouse is permanently attached to my hand? I like to use keyboard shortcuts, especially if someone is watching me, because they make me look like a pro. With just a few key strokes I can leave a mouser spinning their wheel! Whatever your motivation, here's a big list of keyboard shortcuts:

GENERAL SHORTCUTS

- CTRL - X - Cut
- CTRL - C - Copy
- CTRL - V - Paste
- CTRL - Z - Undo
- TAB - tab forwards through a form
- SHIFT - TAB - tab backwards through a form
- CTRL-TAB - Navigate tabs on a tabbed screen
- ALT- F4 - Quit a program / Shut down
- ALT-TAB - Hold down the ALT key and hit tab to cycle through open windows.
- CTL-ESCAPE - Display the Start menu
- F1 - Help menu
- SHIFT & Restart - To restart just windows and not your whole computer, hold down the shift key when you click the OK button on the shutdown screen. Saves lots of time. (not for XP)

FILE & DESKTOP SHORTCUTS

- Hold SHIFT while inserting a CD - Prevents the CD from "autorunning"

If an item is selected:

- CTRL while dragging a file - Copies the file
- CTRL - SHIFT while dragging a file - Creates a shortcut to the file
- SHIFT - DELETE - Deletes an item without sending it to the recycle bin.
- ALT-ENTER - Display a file's properties.
- F2 - To rename the file

In Windows Explorer:

- LEFT ARROW - Collapse the current selection if it is expanded
- RIGHT ARROW - Expand the current selection if it is collapsed -Or- Select the first subfolder
- NUM LOCK- ASTERISK SIGN(*) Expand all folders below the current selection
- F5 – Collapse all folders below the current selection
- NUM LOCK- PLUS SIGN (+) - Expand the selected folder
- NUM LOCK- MINUS SIGN (-) - Collapse the selected folder
- F6 - Switch between left and right panes

In My Computer:

- BACKSPACE - View the folder one level up
- ALT- RIGHT ARROW - Move forward to a previous view
- ALT- LEFT ARROW -Move backward to a previous view

INTERNET BROWSER SHORTCUTS

- Back (Previous Page) Page Up
- Forward (Next Page) Page Down
- Go to Bottom of Page End
- Go to Top of Page Home
- New Tab Ctrl+T
- New Window Ctrl+N
- Close Window Ctrl+W
- Go Up one Line Up Arrow
- Go Down One Line Down Arrow
- Reduce/Enlarge font size Ctrl+ (- or +)
- Full Screen (toggle) F11
- Find on Page Ctrl+F
- Print Current Page/Active Frame Ctrl+P
- Organize Favorites (IE)/
Manage Bookmarks (FF) Ctrl+B
- Add Current Page to Favorites (IE)
or Bookmarks (FF) Ctrl+D
- Maximize a Window Alt+Space+X
- Minimize a window Alt+Space+N
- Scroll page up Alt+Up Arrow
- Scroll page down Alt+Down Arrow
- Open History Window Ctrl+H
- Reload Current Page Ctrl+R or F5
- Stop Esc

- A faster way to type in addresses with IE and FF is to just type in the name of the site and hit CTRL + Enter. The "<http://www.>" and ".com" will be added for you!

Internet Explorer ONLY

- Open Favorites Bar Ctrl+I
- Select text in address bar Alt+D
- Force Reload (not from cache) Ctrl+F5

Firefox ONLY

- Cursor to address bar Ctrl+L
- Cursor to search box Ctrl+K
- Undo last closed tab Ctrl+Shift+T
- Find as you type search box Ctrl+F
- Select text in Location Bar Ctrl+L
- Force Reload (not from Cache) Ctrl+Shift+R

WINDOWS KEY SHORTCUTS

The Windows key can be used in conjunction with other keys to act as a keyboard shortcut for faster access to menu commands. Now, while the Alt key tends to open program menus (ex: Alt+F opens the File menu and Alt+E opens the Edit menu) and the Ctrl key performs actual operations (ex: Ctrl+C will copy and Ctrl+V will paste), the Windows key will open various Windows tools...

Win key + R will open the Start menu's Run box

Win key + F will open the Start menu's Find window

Win key + E will quickly launch Explorer

Win key + Pause/Break will open the System Properties window

Win key + M will Minimize all windows

Win key + Shift + M will undo Minimize all windows

Win key + D will switch between minimizing all open programs and showing them all

Win key + Tab will cycle through items on the taskbar

Win key by itself will open the Start menu

You can also open programs or folders on your desktop by pressing the Windows key + the first letter of the program/folder/shortcut + Enter . Sounds kind of tedious, but if you're in a bind with your mouse, it can come in quite handy.

ARROW TRICKS

There is a cool little arrow trick to try with word processing programs. Next time you're using your arrow keys to go from one area of a sentence to another (left and right arrows), hold down your CTRL key. Instead of moving one space at a time, you'll go one word at a time.

If you're using the up and down arrows to go from line to line, holding down the CTRL key will make your cursor jump from paragraph to paragraph (well, from carriage return to carriage return anyway).

One last thing, if you hold down the SHIFT key while you do this (i.e. hold down SHIFT + CTRL at the same time), you select text as you arrow along.

I've tested this in MS Word and Wordpad, but it *should* work no matter what word processing program you use.

HOME / END KEY FUN

Do you ever find yourself scrolling through a huge folder ? Well, if you need to get to the beginning or the end quickly, just press Ctrl+Home . If you want to get to the end, click Ctrl+End.

Appendix G – Identity Theft

Identity theft, while not strictly a computer problem, has been on the increase because of the computer revolution and specifically the internet. Purchasing and providing personal information over the internet has made it easier for thieves to steal your identity. They also can run-up charges on your credit card, or apply for credit cards in your name, much faster than in the past. With that in mind I would offer the following information you can utilize to *reduce* the chances of identity theft.

In the course of a busy day, you may write a check at the grocery store, charge tickets to a ball game, rent a car, mail your tax returns, change service providers for your cell phone, or utilize a credit card. Chances are you don't give these everyday transactions a second thought. But an identity thief does.

Identity theft is a serious crime. People whose identities have been stolen can spend months or years and thousands of dollars cleaning up the mess the thieves have made of a good name and credit record. In the meantime, victims of identity theft may lose job opportunities, be refused loans for education, housing, or cars, and even get arrested for crimes they didn't commit. Humiliation, anger, and frustration are among the feelings victims experience as they navigate the process of rescuing their identity.

If you've not yet been a victim of identity theft, the federal trade commission says there are ways to reduce your chances:

Your social security number is the holy grail for identity thieves. Armed with that information they can access a treasure trove of details about your life. Don't carry your social security card in your wallet and be extremely careful about giving out the number. (please don't ask me why so many organizations insist upon using your social security number as your member id. it's stupid and dangerous.)

Never divulge personal information over the phone to someone you haven't called.

Try to carry just two credit cards and make sure you have the numbers written down in a safe place in case they're lost. If you limit the number of credit cards in your wallet, you limit the amount of damage a thief can do.

If, like most people, you still use the postal service to pay your bills, don't leave them in your mailbox at the end of your driveway and flip up the red flag. You're just alerting an id thief that there is potentially important information inside. Betsy broader, the attorney who oversees the FTC's identity theft program, says she never puts their bills anywhere but "in that blue box on the corner." in other words, deposit your payments directly into a U.S. postal service box.

Get a shredder. Use it on any documents you're discarding before you toss them into the trash. This includes old tax returns, monthly credit card statements, bank statements, checks, pay stubs, letters from the government, and medical bills that have accounts such as your social security number on them. In short, any piece of paper you no longer need that contains personal information.

Save a tree (potentially a forest) and stop those pre-approved credit card and home equity applications you get in the mail. They're another gold mine for the id thief. Contact the consumer data industry association either via their toll-free number

To Protect & Maintain Your PC | 2010

(888-567-8688) or by visiting <http://www.optoutprescreen.com/>. That's what I did. The online approach allows you to stop these solicitations for two years or permanently . If you change your mind, you can opt back in at any time.

One piece of advice: you can either submit your request to be taken off these lists for pre-approved credit accounts online - which costs \$5.00 - or print the form and mail it in - which costs the price of a first class stamp.

The above website also has links to the direct marketing association (search). On this web site you can register to be removed from other types of mail and telephone solicitations for a maximum of 5 years.

Check your credit report at least once a year. The fair and accurate credit transactions act (fact) signed into law late last year gives you the right to request an annual copy of your credit report for free .


Of course, if you are turned down for credit for any reason, you're entitled to a copy of your report no matter where you live. But even if you have to pay for a copy of your credit report before then it can pay off. For instance, if you are planning to move or buy a house or a car in the next six months, it's critical that you clear up any black marks on your credit history before you apply for a mortgage or try to get the utilities turned on.

By the way, beware of pop-up ads and internet-based organization that offer to get you a "free" copy of your credit report. Read the fine print. You could be signing up for other services you don't need or it could be a way to lure you into giving out your personal information.

Don't leave bills, brokerage statements, and other papers lying around within easy reach of anyone visiting your home.

Don't respond to emails asking you for sensitive information. Government agencies and legitimate organizations don't operate this way. Financial organization such as Citigroup have been the target of spammers who send "urgent!" emails instructing people to click on an imbedded internet link. When they do, they find themselves at an official-looking site, complete with the organization's logo, that instructs them to fill out the "secure" questionnaire. This technique is known as "phishing." don't take the bait.

For more ways to protect yourself from identity theft, check out the FTC's web site: <http://www.consumer.gov/idtheft>.



Appendix H – EQUIPMENT RECOMMENDATIONS

COMPUTER

“What computer should I purchase?” is a question that I am often asked. The answer often tends to be dependent on your computer usage. A game playing computer is quite different than an Office Work computer, which is quite different from a Family Computer. A standard Office Computer does not require as much technology as a Family or Gaming Computer. I usually sit down with my clients and review or customize the computer that they need. Generally, however, I keep three important things in mind: 1) Memory (RAM), Disk Storage (GB) and processor speed (GHz). I want to get the most RAM, GB's, and GHz as possible on their budget. I start out with RAM (1 GB for Windows XP, 2GB for Windows Vista) memory, 250-320 GB hard drive, and 2.5 GHz processor, and build from there. I also factor in a DVD burner drive and a memory card reader. I try to buy as much as their budget allows, as I have never had anyone tell me after using their computer that they wish they had bought a cheaper computer.



KEYBOARDS & MICE

The right keyboard and the right mouse can make a huge difference in your lifestyle. If you have ever experienced pains in your wrist, elbow, or shoulder after an extended period of computer usage it could be because of the keyboard and/or mouse. Painful experience has taught me that you can develop tennis elbow using the keyboard and mouse.



A keyboard should be designed or customizable to your needs. For instance my keyboard (a Logitech G11 as shown to the left) has 18 programmable keys on the left side of the standard qwerty keys, and a numeric keypad on the right side. I use the programmable keys to perform many of the standard windows and office keyboard shortcuts by simply depress the programmed key. This significantly reduces the amount of mousing and keystroking that I would otherwise have to do,

thereby reducing hand arm, and shoulder pains.

A mouse is not just a mouse – but an ergonomic device. Depending on the mouse design there is comfort as well as functionality issues to be considered. Many mice have additional buttons that can be programmed to do various things for you. You may also consider a mouse replacement such as a trackball. I utilize a trackball (a Logitech TrackMan Wheel as shown on the right) as I have extended usage of the mouse in the course of my home office work day. This allows me to place my hand and arm in a supported position, while my thumb moves the cursor, and my index and middle finger press the right and left mouse buttons as well as the scroll wheel.





A client of mine swears by the Cordless Desktop® MX™ 5500 Keyboard/Mouse combo (as shown to the left) as an excellent choice for his staff of 12 computer users.

MONITORS



The right size monitor, adjusted to the correct resolution, will make your computer usage more pleasurable. You should balance the size, resolution, and clarity before purchasing a monitor. The correct monitor will reduce the eyestrain you will experience when you use your computer for extended periods of time. Your monitor should be large enough so that you can display all the information you are working on in one pane. This right size monitor will reduce the amount of scrolling as well as changing windows to view the information. You also need to consider if you need a flat screen or widescreen monitor.

Basically the difference is the aspect ratio. A flat screen is like a standard television and is defined as a 4:3 aspect ratio (as shown upper left). A wide screen is like a movie screen and is defined as a 5:4: aspect ratio (as shown lower right). Wide screens allow you to view more information horizontally, while flat screen allow more information to be displayed vertically. The correct resolution will make it easier for you to read the text on the screen. The size of the monitor is measured by the diagonal between the opposite corners of the screen (usually 17" to 24" for desktop monitors, and 12" to 17" for laptops). The resolution is the number of pixels across and down (usually between 1024x768 to 1680x1050). The smaller the resolution the larger the text, but there is less text displayed on the monitor. The higher resolution allows you to see more information but the text size is smaller. The native resolution is the size the monitor was designed for, and usually provides the sharpest image possible. Changing the resolution of you monitor could change the aspect ratio (the appearance of being squeezed or stretched, as well as the clarity (fuzziness) of the image). When you choose your monitor it is best to go to a store that sell monitors and look at each size, then adjust the resolution of the monitor that interests you. You should take into account the clarity and readability of the monitor before you make a buying decision, as well as the size and resolution.



Another aspect of you monitor is the stand. A good stand will allow you to adjust the monitor position in three axis; height, tilt, and swivel. The height of the monitor should be adjustable to relieve the neck pain you might acquire if the monitor is to low or to high. The tilt adjustment (the movement of the upper/lower portion forward or backward) will protect you from any glare that could result from the lighting at your workspace. Tilting your monitor will reduce any eyestrain if you have glare on your monitor. The swivel is the movement of the left/right side forward or backward. This also helps reduce glare, and therefore eye strain.

OTHER COMPUTER EQUIPMENT

Speakers – I enjoy music while I am working so I have a high quality speaker system install on my computer. Even if you are not a music lover a decent speaker system is important. By setting up computer sound events (such as when you accidentally hit the Caps Lock or Insert key) you can hear an audible tone that alters you to various actions that you have taken. This can be done in Windows XP Control Panel “Select Sounds and Audio Devices”, or Windows Vista or 7 Control Panel “Sound” under the “Sound” tab.



Headphones – If privacy is an issue you can plug in a standard headset into your computer to enjoy music without disturbing others that a nearby. You may also wish to consider obtaining headphone with an attached microphone so that you can place internet telephone calls through your computer.



Video Camera – Video conferencing with family, friends, and colleges can be an enjoyable means of keeping-up-to-date. A good quality webcam can cost under \$60 and provide you with this means of communication. Signing up with a video serve (such as [Skype](#)) for internet video is inexpensive (and often free – such as Skype).



Printers – The first thing to decide when you are choosing a printer is if you need an inject or laser printer. Then you have to decide if you need color or grayscale (B&W) printing. Finally you have to factor in the cost of the printer. This cost is not only the purchase price of the printer, but the consumable cost of the ink/toner cartridges. While Inkjet printer can be inexpensive to purchase the cost of the ink cartridges can be expensive, especially since they only last for a few hundred pages of printing. A laser printer is more expensive that an inkjet and the toner cartridges are about twice the cost of the inkjet cartridges. However the number of pages a toner cartridge can print is about 3-4 times that of an inkjet printer. This is known as the cost per page. Generally the cost per page of a laser printer is about half that of an inkjet printer. If you have modest printing needs (a few hundred pages per month) an inkjet may be your best decision. If you are printing a few hundred pages per week you should consider a laser printer. I myself use both – I have an inexpensive color inkjet for when I want to print color, and a grayscale laser for my everyday printing.



Another consideration is if you should purchase a multi-function printer, so that you can print, scan, copy and fax documents. If you find yourself wanting to make a copy of something, or scan something into your computer, then by a means obtain a multi-function printer. This can especially be wise if you have a home office. Be aware though that multi-function printers are not meant to provide volume copies, as they can overheat a damage the printer if you copy in quantity.

BACKUP DEVICES

Please refer to the section of this booklet on “Disaster protect” for the different type of backups that I will discuss here. Again, please remember to purchase the largest storage size backup device that you can afford, as you will eventually need more backup than you anticipate.

- A USB Flash Memory Drive in the 4GB to 8GB storage range is fine for a “Documents and Data” backup.
- An Optical (CD-DVD) Drive is fine for a “System Parameters and Settings” backup, but it becomes too cumbersome when you do anything other than this type of backup.
- An External Hard Disk in the 320GB or larger storage size is just perfect for backing up “All Files but Cache Files”.
- Magneto-Optical Storage removable storage device is required if you do an “All Volumes” backup and you have a large amount of data to backup. It is also an excellent off-site backup drive as the removable data cartridge can be carried to an off-site in case of fire, water, and other damage that may occur.



OTHER EQUIPMENT



Chair – A good chair can be a comfort, while a bad chair can be a pain from the neck on down. Improper seating during an extended time on the computer can cause upper and lower back pain, as well as thigh knee or ankle pain. See Appendix I – Computer Workstation Ergonomics (Seating section) for more information on proper seating at your computer. When purchasing a computer chair I recommend that you go to the store and sit in the chair for 20 to 30 minutes. While the store clerk may give you a funny look they will understand when you explain it to them. Believe me, I know whereof I speak, as I have done this for the last three chairs I purchased. Do not be concerned about price that much, as the price of relieving your aches

and pains is far greater than the additional cost for a better fitting chair.

Reading Glasses – If you are a bifocal eyeglass person you really need a pair of reading glasses while utilizing your computer. If you don't have reading glasses you will be putting a strain on your neck as you adjust your head to read the computer monitor. I keep a pair of reading glasses with me everywhere I visit, and utilize them at all times. This has made a big difference in my neck strain, and will make a big difference with you pains in the neck (computer-wise speaking).



Shredder – Given the new privacy laws, and the risk of identity theft, I recommend to my clients that they purchase a good cross-cut or diamond cut shredder and keep it near the printer. This way if you decide to trash a print out you can immediately shred it. If you deal with privacy issues (such as a lawyer, medical information, or bookkeeping/accounting information you must shred all the paperwork you throw away to comply with Federal privacy laws.

Equipment Layout – I prefer that my computer equipment be within arms' reach, or a swivel of the chair, so that I am not constantly getting up and down from my chair. You should do what is comfortable for your need. Please make sure you have sufficient desktop space for any ant computer or papers you may need. I also have a "Monitor Clip" attached to my monitor, so I can review any papers I am working with at the same height as my monitor. I highly recommend this inexpensive item to all my clients.



UNINTERRUPTIBLE POWER SUPPLY

The APC Back-UPS ES offers the best value for protecting your home and home office computer systems. Completely redesigned to use less power during normal operation, the Back-UPS ES provides enough backup power for you to work through short and medium length power outages. It also safeguards your equipment from damaging surges and spikes that travel along your utility and data lines. Most models include our award-winning software, which automatically saves open files and gracefully shuts down your computer during extended outages. Additional features like an audible alarm, LED status indicator, user replaceable battery, push-button circuit breaker and transformer-block spaced outlets make the Back-UPS ES the perfect unit to protect your productivity from the constant threat of power outages and lost data.

Please visit the [APC Back-UPS](#) web site for more information.

Power Draw

Below is a list of available models. The current Estimated Runtime associated with each model is based on a power draw of **100W**. By adjusting the power draw to meet your requirements you can narrow down the list to only those models that meet your requirements.

Estimated Runtime

(hrs:mins)

Products 120V Output / 120V Input

<u>0:06</u>	<u>APC Back-UPS ES, 6 outlet 350VA, 120V, without auto shutdown software</u>	BE350G	\$49.99
<u>0:14</u>	<u>APC Back-UPS ES 8 Outlet 450VA 120V</u>	BE450G	\$59.99
<u>0:28</u>	<u>APC Back-UPS ES 8 Outlet 550VA 120V</u>	BE550G	\$59.99
<u>0:32</u>	<u>APC Back-UPS ES 8 Outlet 650VA 120V</u>	BE650G	\$79.99
<u>0:38</u>	<u>APC Power Saving Back-UPS ES, 10 outlet, 750VA, 120V</u>	BE750G	\$99.99

** Except where noted, all prices are Estimated Resale Price (ERP) - Without Tax/VAT. Pricing in other locations and sites may vary.

APC Back-UPS



Appendix I – Helpful Links

- [Profitpages Lists of Eastern Montgomery & Lower Bucks County PA Sites](#)
- [Computer History Museum](#)
- [The Elder Geek on Windows XP](#)
- [The Elder Geek on Windows Vista](#)
- [The Windows Club](#)
- [How To Geek](#)
- [Gismo's Freeware Review](#)
- [Utility Geek](#)
- [Hoax Busters](#)
- [Virus Myths](#)
- [Webopedia](#)
- [Webby Awards](#)
- [PC Magazine](#)
- [PC World](#)
- [PC Today](#)
- [Smart Computing](#)
- [Computer Power User](#)
- [Annoyances.org!](#)
- [Goldmine](#)
- [Quickbooks](#)
- [Microsoft](#)
- [Microsoft Windows Products](#)
- [Windows XP Home Page](#)
- [Windows Vista Home Page](#)
- [Windows 7 Home Page](#)
- [Microsoft Office](#)
- [Office Online Home Page](#)
- [Microsoft Help & Support](#)
- [Microsoft Download Center](#)
- [Microsoft Security Center](#)
- [Ultimate List of Free Office Software from Microsoft](#)
- [Ultimate List of Free Windows Software from Microsoft](#)
- [Optimize Windows XP for Better Performance](#)
- [Optimize Windows Vista for Better Performance](#)
- [Optimize Windows 7 for Better Performance](#)
- [Resolving Blue Screen Errors in Windows XP](#)
- [Resolving Blue Screen Errors in Windows Vista](#)
- [Resolving Blue Screen Errors in Windows 7](#)

Appendix J – COMPUTER WORKSTATION ERGONOMICS



Tips for correcting common computer workstation problems and preventing repetitive strain injuries.

Stanford University
Environmental Health & Safety
Occupational Health & Safety
Program

Seating

Feet dangling?

- Lower the chair seat until your feet rest on the floor, or use a footrest.

Insufficient back support?

- Adjust the backrest for better lumbar support, or use a rolled-up towel or back support cushion.

Armrest preventing a natural arm & shoulder position?

- Adjust chair armrests, in/out or up/down, or remove armrests if they are not used.

Improper seat fit (height, depth, tilt)?

- Use the chair adjustment functions to create a better fit, or
- If your chair will not adjust enough for you, a more adjustable chair may be needed.*

** If you are purchasing a new desk chair, consider only those with full adjustability. Refer to the "Pre-approved Ergo Product List" on the EH&S website.*

Keyboard/Mouse

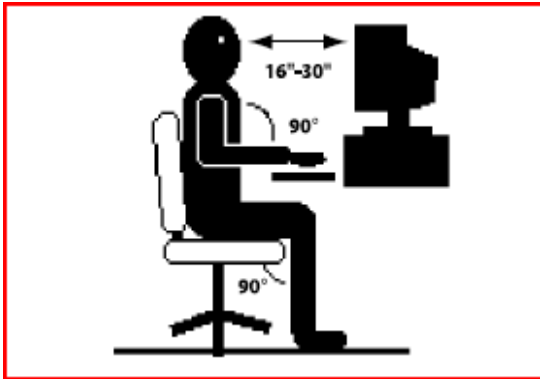
Keyboard/mouse too high/low/tilted?

- Use an adjustable keyboard or mouse tray, or adjust your chair height. You may need to add a footrest.
- Retract the keyboard support legs to keep the keyboard flat.

Keyboard/mouse too far from user?

- Move closer to the equipment or move the equipment closer to you.
- Consider using a keyboard/mouse tray.

Ergonomic Injuries are rapidly increasing as people spend more time at computers-most, however, are preventable. By reviewing these tips and studying the diagram, you can find ways to adjust your workstation to avoid injuries.



Your Monitor

Improper viewing distance?

- Move the monitor forward or back as needed. If a wall hinders monitor placement, move your desk away from the wall or find a deeper work surface.
- Use a keyboard/mouse tray to increase viewing distance.

Monitor too low?

- Use monitor risers to increase height. (Phone books, reams of paper, etc., will work if they can be secured.)

Screen glare?

- Keep the screen perpendicular to any strong light source. Do not tilt the screen, keep it upright.
- Use an anti-glare screen or hood.

Work Environment

Cramped leg space?

- Clear out items beneath the work surface or rearrange your work area.

Reaching too far for tools, etc.?

- Reorganize your work area to allow the most frequently used items to be within a forearm's reach.
- Avoid frequent reaches above shoulder height.

Eyestrain from direct/indirect glare?

- Arrange task lighting to provide diffuse, indirect illumination.
- Reduce fluorescent lighting glare with light diffusers, and/or light filter products (tube sleeves or filter panels).

Work Practices

Improper work postures?

- Avoid sustained, awkward postures.
- Pay attention to any body discomfort.

Extended periods of computer use?

- As a routine work practice, take a 1-2 minute break after every 30 minutes at the computer.
- Use a timer to remind yourself to take a "microbreak".
- Perform office exercises to relax, and to rest eyes.
- Vary your work tasks to avoid long stints in front of the computer.



Exercise Tips

After every 30 minutes of continuous computer use, pause to perform a few office exercises.*

Eyes

- To relieve dry eyes, close your eyes tightly for a second, then open them widely. Repeat several times.
- Refocus your eyes momentarily on an object that is at least 20 feet away.

Hands/Forearms

- Spread your fingers wide and hold, form fists and hold. Repeat several times.
- Place your hands together with fingers pointing upwards and at chin level. Slowly lower your hands, part them, and reverse the process. Repeat several times.

Neck

- Keeping your chin tucked in, slowly turn your head to one side and hold. Alternate sides and repeat several times.

Shoulders

- Slowly shrug shoulders in a forward circular motion. Alternate to reverse circular motion.

Back

- While standing with your feet about shoulder width apart and with your hands on hips, slowly lean hips forward and shoulders slightly back.

To Learn More

- Take a computer workstation ergonomics class. These are offered several times a quarter. See the **Training and Educational Opportunities** guide, issued quarterly in the **Stanford Report**, for the current class schedule; OR
- Use the EH&S Workstation Ergonomics CD-ROM for employees and students (contact your local Human Resources Officer)

Also

- Visit EH&S's ErgoLab to try out recommended models of ergonomic office equipment. Call (650) 725-3209 for an appointment.
- Consult the Pre-approved Ergo Product List before purchasing a new chair. This list is available on the EH&S ergonomics website at:

<http://www.stanford.edu/dept/EHS/prod/general/ergo/index.html>

For further assistance please contact the EH&S Occupational Health & Safety Program at:

(650) 725-3209.

** Any exercise program should be approved by your physician. If you have an injury or any type of recurring discomfort, you should immediately report this information to your supervisor and obtain a medical evaluation. These stretching exercises are not provided to cure any existing problems, but they may help in preventing any future ones.*



A BRIEF RESUME OF MARK DAWSON

For the last several years Mark Dawson has provided consulting and training on Windows and Macintosh computers, as well as in Internet and Web Page development for several clients. These services are available, at reasonable rates for families, small organizations and the self employed in the Lower Bucks County / Eastern Montgomery County region of Pennsylvania. Some of their accomplishments are:

- Provided the knowledge and experience necessary for small organizations to manage their Customer Relations and Finances. This includes the installation, configuration, maintenance, and training for GoldMine Business Contact Manager and QuickBooks Accounting, as well as Microsoft Office applications and procedures.
- Provided the knowledge and experience necessary for small organizations to establish an Internet presence. This includes modest web page development (<http://www.profitpages.com/>) and Internet training.
- Provided training and consulting services to the self employed and small organizations in automating their operations using Windows and Macintosh computers. This includes implementing and maintaining local area computer networks.
- Provided computer consulting services to small and medium organizations included project management, systems analysis and design, data base design, testing, training, and product evaluation.
- Developer of Standards and Procedures for the GE Aerospace (currently Lockheed Martin) M&DSO Engineering Department. These standards and procedures are being utilized by all engineers within this department in the development of products, software, and services.
- Program Manager for a Government contracted \$3 million computer systems project as a result of my efforts as the Marketing and Proposal

Manager. At the time of their leaving this position this program was in progress, on schedule, within budget, and had earned a 100% award fee.

- Chief Engineer on a \$3 million Government contract for a computer systems development program that was delivered on original schedule, within original budget, and with all technical capabilities incorporated.
- Proposal Support Lead Engineer on a NATO proposal for which we did not expect to be competitive. As a result of the engineering teams effort we were chosen as the best technical proposal, but lost the contract on the pricing.
- Lead Systems Engineer on a Government contract for a computer systems development effort, for which the technical effort was acclaimed by the customer as some of the finest work that they had ever received.

This excellent record of achievement can be applied to your organizations, and I would be happy to discuss my qualifications and your needs with you in a personal interview at your convenience.

Mark can be reached on the web at <http://www.profitpages.com/PIP/> or mark@profitpages.com

For more "General Computing Tips" visit my website at <http://profitpages.com/PIP/wininfo.htm>

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